DOCUMENT RESUME

ED 269 212 RC 015 730

TITLE	An American Indian Development Finance Institution. A Compendium of Papers Submitted to the Select Committee on Indian Affairs of the United States Senate (April, 1986).
INSTITUTION	Congress of the U.S., Washington, D.C. Senate Select Committee on Indian Affairs.
PUB DATE	86
NOTE	327p.; Document contains small print.
PUB TYPE	Legal/Legislative/Regulatory Materials (090) -- Collected Works - General (020)
EDRS PRICE	MF01/PC14 Plus Postage.
DESCRIPTORS	*American Indian Reservations; American Indians; Anthologies; Change Strategies; Cost Effectiveness; *Economic Development; Economic Opportunities; *Federal Indian Relationship; Federal Legislation; *Finance Reform; *Financial Problems; Program Evaluation; Tax Effort; Taxes; *Tribal Sovereignty; Tribes
IDENTIFIERS	Congress 99th

ABSTRACT

These papers provide indepth analyses of barriers to and proposals for economic development on Indian reservations. The collection is a follow through to April 29, 1982 hearings of the Select Committee on Indian Affairs of the United States Senate. Alan R. Parker and Charles Trimble survey Indian economic development issues including the federal role, tribal experience, legal questions of development, and capital and financing issues as well as listing relevant federal assistance programs. Eric D. Eberhard examines the American Indian Development Finance Corporation in the context of federal Indian law. Eric Natwig describes institutional barriers to financing development projects in Indian country and establishes the need for an independent development finance institution. Ronald L. Trosper estimates capital needs for an American Indian Development Finance Corporation. Lorraine Turner Ruffing discusses initiatives in development finance including domestic and international programs and institutions. A second paper by Trosper offers guidelines for project evaluation on reservations, applying cost-benefit analysis and social accounting matrices to four hypothetical projects. Reka Potgieter Hoff discusses tribal taxation and economic development. Tables and explanatory notes accompany the papers. (LFL)

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ED269212

99th Congress
2d Session

COMMITTEE PRINT

S. PRT.
99-142

AN AMERICAN INDIAN DEVELOPMENT FINANCE INSTITUTION

A COMPENDIUM OF PAPERS

SUBMITTED TO THE

SELECT COMMITTEE ON INDIAN AFFAIRS

OF THE

UNITED STATES SENATE

APRIL 1986

MAY 1986
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U.S. GOVERNMENT PRINTING OFFICE
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INTRODUCTION

On April 29, 1982, the Select Committee on Indian Affairs held an oversight hearing on economic development on Indian Reservations. This was to be a two part series: the first a hearing on economic development issues on Indian reservations; the second to be a compendium of papers providing an in-depth analysis of barriers to such economic development. This compendium of papers is the follow through to the April 29, 1982, hearings.

Since the day I was elected to the Congress, on October 24, 1963, the continuing word I have received from Indian representatives in both the House and the Senate has been the need for development of reservation economies. The American Indian Policy Review Commission (AIPRC) in its 1977 report to Congress identified economic development and the desire to achieve economic independence as the number one priority of the Indian tribes and their members. Both the AIPRC and the 1984 Report of the Presidential Commission on Indian Reservation Economies stressed the need for such development and set forth numerous recommendations.

While reservation economies remain for the most part abysmally lacking, nevertheless there has been progress. Policies have been put in place or made newly available attempting to meld Federal initiatives with tribal management and private sector involvement. Under the Nixon Administration, the Indian Self-Determination and Education Assistance Act of 1975 and the Indian Finance Act of 1974 were both enacted. The one provided for contracting of Federal programs by Indian tribes or Indian organizations, thus enhancing local control and management of Federal programs; the other provided access to capital either through direct loans from the Federal Government or from private sources through the aegis of loan guarantee authority up to 90% of a loan coupled with an interest subsidy to assure that the Indian borrower incur interest at a rate no greater than that paid by the United States on obligations of comparable maturity (25 U.S.C. 1464).

For a number of years individual Indian entrepeneurs have had access to Federal contracting through the Small Business Administration's Section 8(a) minority business program, and more recently the SBA has recognized tribally owned businesses as eligible minority businesses through this program. This program has been instrumental in opening the door to a small number of tribes for Defense procurement contracts as well as contracts with other agencies. However, the threat of "graduation" now jeopardizes some of the tribal manufacturing and business operations that have been generated through the program.

Throughout the years Federal grant or loan programs of modest dimension have been available to Indian tribes. The Administration for Native Americans, a successor to the OEO programs begun in 1964, provides grants to Indian tribes for social and economic development. With less than $30 million spread throughout the Indian community, these grants constitute little more than planning grants or seed money. The Economic Development Administration at the Department of Labor has provided funds for economic development purposes. However, the efforts of EDA have yielded mixed results at best—some projects proving embarrassing failures, some resulting in genuine success stories.

In addition tribes are and have been eligible for Federal grants through Community Development Block Grants and Urban Development Action Grants at HUD, and are eligible for industrial grant programs and land acquisition loans through the Farmer's Home Administration at the Department of Agriculture. More recently, the Department of the Interior has put in place an economic development grant program designed to provide tribes with equity capital to be matched with other tribal contributions which in turn may be used to attract private sector investment for development of a tribe's resources. This program began in fiscal year 1983 with funding of $10 million.

In recent years tribes and the Indian people have looked increasingly toward their own resources, both human and material, and to the private sector for economic development. In 1973 the American Indian National Bank (AINB) was formed with capitalization of $1.5 million provided by investment of tribal funds in the bank stock. By 1982 thirteen tribes had investments in the stock of the AINB; the net worth of the bank had grown to $2.1 million and bank deposits of $20.6 million more on hand.

Indian owned businesses have proliferated in the last fifteen years. According to the "Red Pages: Businesses Across Indian America" produced by LaCourse Communications Corporation (c. 1985), there are at least 5,179 American Indian owned businesses in all 50 states whose projected combined earnings are expected to be approximately $500 million. As noted in this publication, these businesses appear in virtually every area of commercial endeavor: agriculture, forestry, fishing, mining, construction, manufacturing, transportation and public utilities, wholesale and retail trade, services, and public administration.

The 1982 hearing of the Select Committee on Indian Affairs graphically illustrates the success of the Mississippi Choctaw Tribe in establishment of an on-going commercial enterprise in cooperation with private sector initiative. A key element in this success story was the issuance of an Industrial Development Bond by the City of Philadelphia on behalf of the Tribe. In the 97th Congress, Congress enacted the Indian Tax Status Act (P.L. 97-473) recognizing Indian tribes as governmental units for most purposes of the Federal Internal Revenue Code. While this Act does not recognize the authority of tribes to issue Industrial Development Bonds, it does acknowledge their authority to issue Municipal Bonds. The Jicarilla Apache Tribe of Arizona raised $30.2 million through a tribal bond issue to purchase some 55,000 acres to be used for tribal economic development purposes, and the Lac du Flambeau Chippewas in Wisconsin recently raised some $16 million through a tribal bond issue to purchase the Simpson Electric Company, a manufacturer of electrical test equipment employing a significant number of tribal members as well as non-Indian workers. The Cherokee

Nation of Oklahoma is considering a tribal bond issue in the amount of $70 million for development of a hydroelectric project and the Navajo Nation is now considering use of tribal bond issues as a means for funding future tribal economic development ventures.

Consideration has been given to inclusion of Indian reservations within the Enterprise Zone concept recently before the Congress, and at least two Indian tribes have taken steps to have their reservations recognized as International Trade Zones as a means of stimulating their reservation development.

Despite these success stories, it is clear that development of reservation economies continues to be a number one need. The social pathology of the American Indian and Native Alaskan manifested by high drop-out rates from educational systems, high incidences of alcoholism, poor health, and low self-esteem, can be correlated directly with high unemployment rates stemming from lack of economic activity at the reservation or community level.

The compendium of papers that are included in this Committee Report consider some of the barriers to development of economies within Indian country. In issuing this Report, it is the hope and intention of the Committee to stimulate new thought and continued consideration of innovative approaches that might be utilized to assist our Native Americans in their efforts to raise their economies to levels commensurate with the rest of the United States.

MARK ANDREWS, *Chairman,*
Select Committee on Indian Affairs.

SURVEY OF INDIAN ECONOMIC DEVELOPMENT ISSUES

By Alan R. Parker with Charles Trimble

INTRODUCTION

The current Administration has consistently expressed a strong interest in the area of Indian Economic Development. A federal policy supportive of the efforts of Indian tribes and organizations to identify workable solutions to the deep-seated problems confronting Indian reservation economies has been articulated. In the face of severe fiscal constraints, the Administration has established an economic development initiative designed to demonstrate through the provision of modest grants, that there are indeed viable business development projects in Indian country. Just as importantly, this initiative represents an opportunity to use government assistance as an incentive to encourage the development of sound business management and corporate organizational structures on the part of Indian tribes.

However, it is conceded that the economic development programs intended for initiation in fiscal years 1983 and 1984 will, even with optimum impact, be seen as quite limited in relation to the perceived need. This raises the pertinent question of what other *appropriate* initiatives should be considered and undertaken, supported or sponsored by Federal Government policy makers. In initiating such a proposition, the qualifier "appropriate" is purposely *italicized.* The reality is that the present Administration has set out definite guidelines for defining what is *appropriate and sound policy* in relation to the federal role in economic development assistance.

Respected commentators, in analyzing the historical record of federal economic development assistance, reinforce the primary tenets of the Administration's policy. Namely, that simply "throwing money at the problem," an approach perhaps best exemplified by the EDA and BIA grant programs of the 1970s, not only failed to achieve their defined economic development objectives but, in many cases, made the situation worse. Examples are cited of project failures which dissipated scarce tribal resources and provided no return for the federal dollar invested. Expenditure of public money for public works projects intended to serve as physical infrastructure supporting economic development projects have been similarly criticized for poor planning and implementation.

Finally, such past federal efforts may have encouraged spendthrift and realistic behavior on the part of recipient tribal organizations, (i.e. "It's only a grant" mentality). The failure of past efforts to come to grips with the underlying causes of Indian economic under-development has been a constant theme found in the available literature on Indian Economic Development.

Consequently, as the Assistant Secretary has acknowledged, the tremendous challenge consists in formulating strategies that may serve as the basis for federal initiatives which will not only avoid the mistakes of the past, but are also compatible with current Administration policy guidelines and fiscal constraints. This challenge is only heightened when viewed in relation to the economic conditions currently prevailing in Indian country. The under-developed economy which characterizes the great majority of Indian reservations has been severely impacted by the current recession and reductions in federally-supported income and job maintenance programs. It has been suggested that if only private sector employment and per capita income attributed to non-federal sources of production were to be measured, the average Indian country unemployment percentage of approximately 50 percent would increase to 80 percent and average per capita income would lower from $3,500 to $2,000.

Of course, it is probably impossible to substantiate such an estimate given the currently available data base against which Indian country economic conditions are measured. However, the point is a valid one on most Indian reservations. A viable private sector economy does not exist and the public sector dominates with predictable consequences. In the face of such an imbalance, the consensus recommendation of most economists is to emphasize such developmental needs as physical infrastructure, human resource development, and financial structuring. Because capital is not internally-generated and accumulated in Indian country, business development enterprises have to look to external sources which place the multiplying factors off the reservation. Federally-subsidized income, job maintenance, and administrative expenditures support the local reservation economy, resulting in what has been labeled a "patron-client" environment which is hostile to the development of a true private sector.

Given this brief analysis, the question is logically posed: What does it make sense for the Federal Government to do? What role, or course of actions, would avoid reinforcing the negative aspects of the past federal role on Indian reservations while encouraging both tribal governments and the private sector to fulfill roles that are more appropriate to them?

The Federal Government clearly has an on-going responsibility toward Indian tribes. Current circumstances appear to call for a leadership role which does not involve *inappropriate* responses or actions. The following report attempts to take this analysis and question as a point of departure. In the process of surveying issues relevant to economic development categorized under the headings: "The Federal Role," "The Tribal Experience," "Legal Questions," and "Capital and Financing," the report identifies areas which the Assistant Secretary may consider *appropriate* for development of initiatives. It is also very important to point out that the survey is based entirely on a review of authorities, reports and commentaries. Where particular observations, conclusions or recommendations are stated, reference is made to an identified source in the form of published reports, studies and other documentation. The reader will find there is a sizable body of literature available on the subject of Indian Economic Development. Much of the material utilized for this report is of relatively recent vintage reflecting both an increased level of interest in the subject matter and an increase in the number of individuals who have acquired sufficient expertise to publish their work.

The fact that a great deal of attention has been directed at these issues resulting in published materials was of great benefit to this research endeavor. Moreover, a major objective of this endeavor was to organize and assemble this material into a single survey document. Since many points addressed here are simply touched upon in a brief manner, an extra effort was made to insure accuracy in the citations. This should facilitate followup by readers who wish to explore particular questions in more depth. While this report attempts to be comprehensive in the sense that an effort was made to identify all pertinent issues (i.e., possible *appropriate* federal initiatives), no attempt was made to treat any particular issue in depth.

In summary, we hope the work will prove valuable in its purpose of reviewing a broad range of possible federal initiatives in economic development. If it serves as a useful reference tool through accurate citation of authorities and provides a context for the consideration of specific issues, our modest objectives will have been realized.

CHAPTER I—THE FEDERAL ROLE

The Federal Government exercises an extraordinary degree of influence over the total range of factors relating to economic development on Indian Reservations.

At least nine cabinet-level departments and three individual agencies presently have programs affecting Indian people.[1] The major departments with multiple programs relating to Indians are Interior; Energy; Health and Human Services; Agriculture; Housing and Urban Development; and Commerce. The Departments of Labor and Transportation also have major programs of importance to Indians. Along with these, the Department of Justice handles most of the legal problems affecting Indian rights. The independent agencies with programs affecting Indians include the Environmental Protection Administration, Small Business Administration, and the Occupational Safety and Health Review Commission.

In addition, a number of temporary commissions whose studies and functions have undoubtedly impacted Indian interests have existed. They included such organizations as the American Indian Policy Review Commissi[illegible] Commission on Water Quality, Commission on National Policy on Gambling, and the Community Service Commission.[2]

Thus, any analysis of what may be done under the auspices of the Federal Government to improve economic conditions and opportunities on Indian reservations should properly be conducted against the backdrop of what is the present role of the Federal Government. Fortunately, there is no lack of documentation both as to the existing functions, activities and responsibilities of these various federal agencies, but also as to their commonly recognized deficiencies or shortcomings.[3]

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[1] American Indian Policy Review Commission, "Fragmentation of Federal Indian Policy," *Final Report*, Vol. I, May 17, 1977 (Washington, D.C.: Government Printing Office, 1977) p. 247.

[2] Ibid., p. 248.

[3] American Indian Policy Review Commission, *Task Force Seven, Final Report on Reservation and Resource Development and Protection* (Washington, D.C.: Government Printing Office 1967). Other studies include:

General Accounting Office, "More Federal Efforts Needed to Improve Indian's Standard of Living Through Business Development," (Washington, D.C.: GAO, 1978).

M. Udall, "Indian Natural Resources Development Act of 1979."

General Accounting Office, "Better Overall Planning Needed to Improve the Standard of Living of White Mt. Apache of Arizona," (Washington, D.C.: GAO, 1975).

General Accounting Office, "Land Management Activities on Three Indian Reservations in S. Dakota Can be Improved," (Washington, D.C.: GAO, 1975).

General Accounting Office, "Indian Natural Resources—Opportunities of Improved Management and Increased Productivity," (Washington, D.C.: GAO, 1975).

General Accounting Office, "Expenditures Benefiting American Indians," (Washington, D.C.: GAO, 1975).

General Accounting Office, "Improving Federally Assisted Business Development on Indian Reservations," (Washington, D.C.: GAO, 1975).

General Accounting Office, "Land Leases on Fort Hall Indian Reservation in Idaho," (Washington, D.C.: GAO, 1974).

Continued

This section of the report will summarize publicly-available information regarding the record of these agencies as well as the major points of pertinent commentaries and studies which have critiqued the impact of this federal role in Indian economic development.

Bureau of Indian Affairs—Trust Management of Natural Resources

The Congress, whose authority in the field of Indian affairs is based on a legal principle commonly referred to as the "plenary power doctrine,"[4] has delegated authority to the Secretary of the Interior "to manage all Indian affairs and all matters arising out of Indian relations" (Sec. 2 of Title 25, U.S. Code). Insofar as this very broad authority bears on the federal role in Indian Economic Development, it is important to keep in perspective the historical origins of the underlying legal-political doctrines upon which this authority is based. The primary source of this federal power may be found in the *Constitution*. The Commerce Clause specifically refers to regulation of "commerce with the Indian Tribes," (*U.S. Constitution*, Art. I, Sec. 8, Cl.3) as does the Treaty Clause (Art. II, Sec. 2, Cl.2) and the property clause (Art. IV, Sec. 3, Cl.2) has been interpreted to authorize federal control over Indian lands. This federal authority was exercised relatively early in the life of Congress beginning with the first Trade and Intercourse Act (Act of April 18, 1796, Ch. 13, Sec. 4, Stat. 452-53) and the Trade and Intercourse Act of 1834 (Ch. 161, Sec. 3, 4 Stat. 729; 25 USC 263). These laws regulated commercial transactions by which Indians sought to dispose of land or other property in exchange for money, liquor, munitions or other goods.

In more recent times Congress has regulated Indian commerce by fixing the terms and conditions of mineral, agricultural and grazing, and business leases as well as leases for other purposes. Specific legislation also pertains to sale of Indian timber, contracts with Indian tribes of tribal members, and the licensing of traders on reservations.

The Supreme Court, in a landmark 1832 decision entitled *Worcester* v. *Georgia* (31 US 515) characterized the relationship between Indian tribes and the U.S. which resulted from the assertion of this broad federal power as "guardian-ward." The Court also interpreted the government's role as constituting a "trust relationship" in the sense that the U.S. had, by retaining a fee title to Indian lands and control over their disposition, assumed the responsibility of a trustee.

Over the years, the administration of these responsibilities by the Department of Interior involved the appropriation of public funds for management of Indian property and resources. The Bureau of Indian Affairs grew into a relatively large bureaucracy and although its present day budget is largely allocated toward

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U.S. Congress, Senate, "Financing the Economic Development of Indians and Indian Organizations," Hearing before Subcommittee on Indian Affairs, May 31, 1973.

General Accounting Office, "Increased Income Could be Earned on Indian Trust Monies Administered by the Bureau of Indian Affairs," (Washington, D.C.: GAO, 1972).

Joint Economic Committee, *Toward Economic Development for Native American Communities*, 91st Congress, 1st Session, 1969.

[4] Felix S. Cohen's *Handbook of Federal Indian Law*, 1982 ed. "Source and Scope of Federal Authority" (Charlottesville, Virginia: Michie Bobbs-Merrill, 1982), pp. 217-220.

social service functions, a significant percentage is devoted to trust management, natural resource, and economic development.

FY '83 budget requests for school operations, Indian services, and management of facilities and general administration under BIA totaled $664.3 million. BIA's FY '83 budget for economic development and employment programs, natural resources development, trust responsibilities, and construction add up to $277.18 million, accounting for approximately 42 percent of the sum allocated for social services.[5]

For the purposes of our analysis, it is relevant to note that the framework of laws and regulations governing administration of BIA trust management duties, defined broadly, retains the basic characteristics initially provided by Congress. Namely, Indian tribes and individual Indian owners of trust property are not authorized to financially encumber or commit trust resources except with the approval of the BIA and in accordance with the specific statutes and regulations governing each type of transaction.[6] It is important to note that these restrictions, on alienation and encumbering of trust property, taken together with federal proscriptions against state government taxation and regulation of trust resources, have undeniably had the intended beneficial effect of protecting the Indian lands from being dissipated. Federal supervision of such transactions has also served to protect Indian tribes and individuals from being the victims of fraudulent dealings. However, contemporary commentators also agree that the degree of governmental involvement in such matters has clearly acted as a deterrent to the interest of the non-Indian business community and has, in certain instances, limited the flexibility of the Indian owners. At least one writer has cited the "bureaucratic morass" involved in negotiating a ground lease as a major reason dissuading developers from pursuing reservation-based projects.[7]

In addition to the complexities and time-consuming procedures involved in negotiating such a lease, the outside investor or joint venturer is also confronted with the human factor in terms of BIA contract officers and realty specialists who often have no incentive to expedite their review and action on such a document.[8] As those in the business world know full well, often time is of the essence and an otherwise good deal can turn cold by the time final BIA approval is tendered. It is impossible to accurately document the extent to which such factors have negatively impacted the potential for sound business opportunities in Indian country. However, several reports have documented the position held by segments of the business community that simply the knowledge that doing certain kinds of business in Indian country necessitates dealing with excess government red tape and, perhaps, incompetent officials has been enough to forego the pursuit of business development possibilities.[9]

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[5] Select Committee on Indian Affairs, U.S. Senate, *Budget Views and Estimates for Fiscal Year 1983,* (Washington, D.C.: Government Printing Office, 1982), pp. 4–35.

[6] Felix S. Cohen's *Handbook of Federal Indian Law,* pp. 214–216.

[7] John Little, *Development Financing Alternatives on Tribal Lands: The Lender's Perspective,* NADSAT, (Tucson, Arizona: University of Arizona, November 1981).

[8] General Accounting Office, "Land Leases on Fort Hall Indian Reservation in Idaho," (Washington, D.C.: GAO, 1974).

The extent to which this factor has served as a broad-based obstacle to reservation-based business development has not been documented in the available literature on the subject. Moreover, this factor should not be considered in isolation from such other considerations as the uncertain legal protections available (under tribal laws) for creditors and investors, or the complexities in doing business with tribal governments.[10] (See Chapter Two, "The Tribal Experience," and Chapter Three, "Legal Questions Relating to Indian Reservations-Based Economic Development.")

However, it is significant to note that the potential for effecting positive change in this BIA role to a significant extent may be found in the administrative discretion of such key governmental officials as the Assistant Secretary for Indian Affairs. This analysis suggests that a review of relevant statutes, regulations and procedures pertaining to the "trust management" role from the perspective of regulatory reforms aimed at facilitating reservation-based business development could prove to be a very fruitful inquiry. Of course, such an initiative should involve the close cooperation of tribal officials as well as representatives of the business community.

An illustration of such a change is the legislative proposal recently adopted by the 97th Congress which is designed to make the Indian mineral leasing law (25 USC 396 et seq.) more flexible. Briefly stated, the present statute has been interpreted by the Solicitor as limiting the authority of the BIA to approve alternatives to a standard mineral lease. The pending bill would authorize a broad range of joint venture agreements between the tribal or individual Indian owners and energy companies, while still protecting the beneficial aspects of the trust status of the resource and federal trust management role. In addition to providing a needed flexibility to the law designed to facilitate development options, the proposed amendments also have the advantage of making possible tribal equity participation in such ventures. Unlike the leasing arrangement in which the tribal role is that of a passive resource owner, a joint venture enables a tribe to become an active partner in the production phase, thereby expanding the benefits of ownership (i.e., increased revenue potential and tax exemptions).

Since the available literature surveyed for this report does not contain specific analysis of the potential for regulatory reform across a broad range of issues, it is difficult to provide more specific examples of areas to examine. Before concluding this section of the report, however, mention should be made of the significant progress made in recent years in the Indian forestry area. The record shows that a cooperative working relationship has developed between tribal and BIA forestry officials which has resulted in both regulatory reform and enhanced sophistication by Indian forestry managers.[11]

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[9] *Applicability of Enterprise Zones to American Indian Reservations*, (Arlington, Virginia: Charles Trimble Company with Free Zone Authority Services and Karl A. Funke & Associates, Inc., 1982).

[10] Eric Natwig, "Institutional Barriers to Financing Development Projects in Indian Country," *Initiatives in Development Finance: Creating an American Indian Development Finance Corporation*, Vol. I (Albuquerque, N.M.: American Indian Development Corporation, 1982).

BIA approval authority over contracts

Distinct from the BIA's natural resource management function is the requirement that the Secretary of the Interior review and approve all contracts with Indian tribes or Indians. This requirement has been codified as Section 81 of Title 25 of the U.S. Code and, in relevant part, reads as follows:

> No agreement shall be made by any person with any tribe of Indians . . . for the payment or delivery of any money or other thing of value, in present or in prospective, or for the granting or procuring any privilege . . . in consideration of services for said Indians relative to their lands . . . unless such contract or agreement be executed and approved as follows: . . .
>
> It shall bear the approval of the Secretary of the Interior and the Commissioner of Indian Affairs indorsed upon it . . . All contracts or agreements made in violation of this section shall be null and void, and all money or other thing of value paid to any person by any Indian or tribe, or any one else, for or on his or their behalf, on account of such services, in excess of the amount approved by the Commissioner and Secretary for such services, may be recovered by suit in the name of the United States in any court in the United States, regardless of the amount in controversy . . .[12]

Originally enacted in 1871, the contemporary application of this law is apparently confined to contracts involving trust funds. (See *Brown* v. *U.S.*, 486 Fed. 658, 8th Cir. 1973) The federal courts have also concluded that Section 81 is not applicable to a business corporation formed by an Indian tribe under state law. (See *Inecon Agricorporation* v. *Tribal Farms, Inc.*, 656 F2d 498, 9th Cir., 1981.)

Since Section 81 appears to be of limited application, it has not been singled out in recent commentaries or published reports as particularly significant in terms of impact on reservation-based economic development. However, the administration of the law certainly deserves review in order to determine its potential impact and whether it should be included in any regulatory reform initiative.

BIA trust funds investment function

Federal law has also charged BIA officials with the responsibility for investing tribal and individual Indian trust monies. Task Force Nine of the American Indian Policy Review Commission conducted what is probably the most recent study of this activity and recommended a number of statutory and regulatory improvements.[13]

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[11] National Indian Timber Symposium, *Treegonomics: Accountability and the Management of Indian Forest Resources*, Final Proceedings of Sixth Annual Meeting (Spokane, Washington: April 1982).

[12] U.S. Code, Title 25, Section 81, p. 80.

[13] American Indian Policy Review Commission, Task Force No. 9, *Law Consolidation, Revision and Codification*, Final Report, Vol. I, September 1976 (Washington, D.C.: Government

Continued

However, the focus of their inquiry appeared to be consolidating and streamlining the law to eliminate duplication and confusion in the law. It appears that the major deficiencies in BIA's management function criticized in the past, i.e., investment practices which resulted in interest yields which were much less than they should have been, have largely been addressed.[14]

The relevant laws require that trust funds be invested in government securities in order to fully protect the principal. While the trust beneficiaries may pledge the interest on trust funds as security for credit extended by private lending institutions,[15] the principal of trust fund deposits is not a source of development funds unless the money is withdrawn from a trust account. It has been suggested that alternative investment procedures may make possible the accumulation of an investment pool. This would appear to be a fruitful area of inquiry with the objective of developing alternatives that would offer the same degree of protection for the principal while allowing some degree of risk to the interest in order to enhance the use of trust funds for economic development purposes. Reportedly, the total amount of trust funds now managed by the BIA averages $1.5 billion. The key criteria to identifying viable alternative procedures would be protection of the principal and that tribal participation is fully informed and voluntary. The investment pool concept only becomes viable when a threshold deposit level is reached, thereby making the cumulative interest figure significant. However, whether truly viable alternatives are possible can only be determined if the opportunity is provided to test a range of ideas.

The Federal Government as developer and creditor

The activities and record of the federal government in administering economic development programs have been extensively critiqued by both government and private sources. The major programs that have provided assistance to enterprise development on Indian Reservations are the Economic Development Administration, the Small Business Administration and the Bureau of Indian Affairs. The General Accounting Office, noting that by the nature of the programs, business ventures funded by SBA and EDA generally involve greater risks than do typical new business ventures financed through conventional sources, took these agencies to task for inadequate review and monitoring of Indian business ventures in a report released in 1975.[16]

"In our opinion," GAO stated, "EDA and SBA have not adequately evaluated the feasibility of proposed business ventures on reservations before providing financing assistance. In some cases these agencies did not require the development of all necessary information to permit a good evaluation of the business ventures'

Printing Office, 1976) pp. 143-144, 303-311. See also General Accounting Office, "Increased Income Could be Earned on Indian Trust Monies Administered by the Bureau of Indian Affairs," Washington, D.C.: GAO, 1972).

[14] General Accounting Office, "Increased Income Could be Earned on Indian Trust Monies."

[15] *Code of Federal Regulations* 25-CFR-91.13(d). See also *Department of the Interior Departmental Manual* 209 DM 8.2.3 and *Bureau of Indian Affairs Manual* 10-BIAM 3.1 & 3.5D(2).

[16] General Accounting Office, "Improving Federally Assisted Business Development on Indian Reservation."

prospects. In other cases the agencies provided financing without requiring the resolution of known problems.

"Once financing has been provided, EDA and SBA did not monitor the business ventures' operations to promptly identify deficiencies in these operations and to provide the assistance needed to correct them before they became so severe that they caused operations to be discontinued."[17]

The Bureau of Indian Affairs assumed a greater role in reservation economic development with the passage of the Indian Finance Act in 1974.[18] The Act was passed to increase the availability of funds to individual Indians and Indian tribes for starting or expanding business enterprises on or near reservations. The GAO in 1977 found several program management deficiencies which hindered the success of the Act. According to the GAO, the Bureau, contrary to stated policy, made direct loans to relending organizations with continuous high delinquency rates. Furthermore, the GAO found that loans were made without a reasonable prospect of repayment. Cited was an example of a loan extended to an Alaskan corporation which owed the Federal Government more than $6 million.[19]

An adequate accounting system was not in place to manage the increased volume of funds for lending as a result of the Indian Finance Act. The GAO noted that this deficiency was brought to the attention of the Bureau two years earlier, but not corrected.[20]

Loan files were found to lack the required documentation on loans made under the Guaranteed and Insured Loan Program. "Some of the files reviewed were missing plans of operation and adequate feasibility studies of the enterprises. Most of the files did not have loan-closing documents, such as copies of notes and collateral." [21]

The GAO's review of loans in default indicated a limited evaluation of loan proposals. GAO stated that the Bureau's analyses were inadequate and relied on evaluations of commercial lenders which were considered superficial.

Also noted was limited loan servicing by lenders of guaranteed loans. The Office of Audit and Investigation of the Department of the Interior stated that the Bureau must establish a monitoring reporting system, but BIA officials demurred, stating that it lacked the staff or the funds to do so.[22]

Another problem noted by the GAO was that short repayment terms could impair the objectives of the program. "Short repayment terms create a large repayment schedule in the formative years of a new business and could possibly be a major factor in the failure of some businesses."

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[17] Ibid., p. 75.

[18] Indian Finance Act, 25 USC 1451 *et seq.* The act provides authority for the Secretary of the Interior to administer direct loan, loan guaranty, and business development programs. Although the authorizing authority for the grant program expired in 1978, the direct loan and loan guaranty programs for FY '83 are funded at approximately $60 million and $15 million, respectively.

[19] General Accounting Office, "More Federal Efforts Needed to Improve Indian's Standard of Living Through Business Development," pp. 31-33.

[20] Ibid., pp. 33-34.

[21] Ibid., pp. 34-36.

[22] Ibid., pp. 37-38.

Another major deficiency found by the GAO, as well as the American Indian Policy Review Commission and the Young Presidents Organization were the limited management and technical assistance provided. (YPO, an international education association, submitted a report to the Secretary of the Interior in April 1977 on the operations of the Indian Finance Act.) The GAO noted, for example, that of the four defaulted guaranty loans examined, only one borrower had received technical assistance.[23] The American Indian Policy Review Commission found that BIA staff lacked the necessary skills to provide meaningful technical assistance. The Commission concluded that the Agency did not have personnel who were "appropriate to the requirements of a specialized technical assistance effort. There are no specialized technicians within the Bureau of Indian Affairs to provide for the rapidly increasing demand for specific expertise in highly technical areas. The depth of training and necessary experience precludes using or retaining existing personnel, in most cases. The present autocratic organizational structure is also not flexible enough to permit technicians to move quickly from area to area."[24]

The Young President's Organization in a later study stated that "On each visit, we heard pleas for meaningful technical assistance and management help. We were unable to identify any case where the IFA (Indian Finance Act) had provided effective technical assistance, probably because it is available under the IFA Act as a 'last resort' source . . . such assistance was less than useful. A budding enterprise cannot wait for various government agencies to negotiate which one can and should provide technical assistance."[25]

To our knowledge, no follow-up studies have been published regarding the BIA credit program in the five years since the 1977 GAO report. Reportedly, BIA credit officers, in response to the earlier criticism, have been more conscientious in the project review process with particular focus on financial analysis of loan applications. However, staffing levels have not increased and one must assume that program capabilities in the loan servicing, monitoring and technical assistance areas have accordingly suffered. It is interesting to note that both the GAO and the American Indian Policy Review Commission have recommended that all federal financial assistance efforts directed at Indian-reservation business development be consolidated into a single agency. The GAO recommendation was based primarily on the rationale that such a change would achieve necessary coordination and efficiency in the use of public funds.[26] The AIPRC recommendation emphasized the objective of addressing the structural causes of Indian under-development.[27]

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[23] Ibid., p. 42.

[24] American Indian Policy Review Commission, *Task Force Seven*, p. 129.

[25] "The Indian Financing Act of 1974," *Young Presidents Organization Team Report* cited by GAO, "More Federal Efforts Needed to Improve Indians' . . ." p. 43.

[26] General Accounting Office, "More Federal Efforts Needed to Improve Indians' Standard of Living . . ." p. 58.

[27] American Indian Policy Review Commission, *Final Report*, Vol. 1, pp. 360-362.

The Federal Government as customer

The potential for expanded business opportunities for Indian tribes and individuals represented by government procurement of goods and services was recently recognized at the Senate Select Committee on Indian Affairs oversight hearings on Indian Economic Development.[28] Witnesses at this hearing pointed out that the industrial development possibilities associated primarily with Department of Defense procurement contracts have the particular advantage of being labor-intensive. The generation of productive private sector employment opportunities has consistently been identified as a priority by Indian leaders. Labor-intensive industrial development addresses a critical need on the reservation and the resulting flow of capital, to the extent it is able to be multiplied within the reservation economy, has an overall beneficial effect.

Federal law expressly provides for a preference to be accorded "Indian labor and . . . the products of Indian Industry" in the 1910 Buy-Indian Act (25 USC 47). From a review of the record, it appears that the Buy-Indian Act was intended by Congress to apply specifically to the "Indian Field Service" of the Department of the Interior. This authority has been employed by the BIA to restrict contracting bids for certain governmental services to firms and enterprises that are entirely owned by Indian individuals and tribes. A recent case decided by the U.S. Supreme Court sheds further light on the applicability of the Buy-Indian Act. In *Glover Construction Co.* v. *Andrus* (466 U.S. 608, May 1980), the court concluded that the contract bids for road construction projects could not be restricted to Indian firms by the BIA. The court interpreted the Buy-Indian Act to be limited by the Federal Property and Administration Services Act of 1965 insofar as certain types of public work projects, including road repair, are concerned.

In addition to the Buy-Indian Act, Congress enacted in Section 7(b) of the 1935 Indian Self-Determination Act, a preference authority for "any contract, subcontract, grant, or subgrant pursuant to this act, the act of April 16, 1934, as amended, or any other act authorizing federal contracts with or grants to Indian organizations or for the benefit of Indians" (25 USC 450e(b)). There has never been, as far as can be determined, an organized effort to implement Section 7(b) as part of a governmentwide economic assistance effort. A number of federal agencies which administer programs "for the benefit of Indians" have reportedly acknowledged the application of Section 7(b) to their contract and grant activities but the full impact or implications of their preference authority has yet to be systematically analyzed. The difference between the type of "for the benefit of Indians" activities affected by Section 7(b) and government procurements generally, or such as may be undertaken by the DOD, is significant in terms of the type and scale of business opportunities represented. Primarily, the difference may be characterized as industrial versus social service. However, the potential for significant additional business opportunities represented by a systematic, full-scale implementation of Section 7(b) should not be underestimated.

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[28] U.S. Congress, Senate Select Committee on Indian Affairs, *Oversight of Economic Development on Indian Reservations*, April 29, 1982, pp. 48–58.

Although the full implications of the *Glover* case for Indian preference in BIA procurements will only be known over time, it seems clear that a broader use for this Indian preference authority will require Congressional action. For example, the Department of Defense FY '82 Appropriation Act was amended to authorize the use of the Buy-Indian Act preference on a motion by Senator Peter Dominici (R., N.M.). According to recent reports, this amendment will be withdrawn in the FY '83 DOD bill.[29] In the interim, the DOD Office of Economic Adjustment and Office of Small and Disadvantaged Business Utilization examined the question of an Indian preference policy and, according to reliable information, concluded that the Buy-Indian Act authority was unnecessary. It was determined superfluous to the existing preference authority for minority contractors contained in Section 8(a) of the Small Business Act.

As discussed earlier, although the SBA 8(a) program has had some success in assisting Indian-owned firms doing business in major urban centers, its effectiveness in providing business development opportunities for reservation-based Indian enterprises has been minimal.[30] Consequently, it would appear that an opportunity exists for constructive initiatives designed to greatly expand opportunities for Indian-owned business enterprises in terms of both volume and variety. Whether the greater potential lies in legislatively extending the Buy-Indian Act to federal procurement activities beyond the BIA, or in overcoming the deficiencies and obstacles to effective use of SBA 8(a) preference authority, is a judgment that can only be made through a more systematic assessment of the facts and issues.

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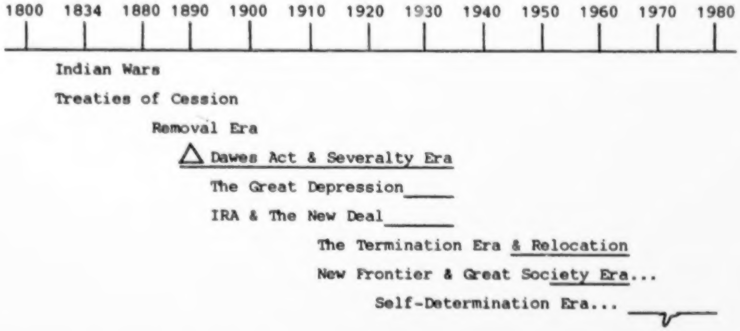
[29] It now appears that the 97th Congress did not act to explicitly repeal the Buy-Indian Authority of the FY82 DOD Appropriation Act. A number of Washington law firms have been pursuing legal arguments that this authority for Indian contracting preference by DOD is still valid. The 97th Congress also authorized a Buy-Indian Act preference in the "Indian set-aside" for reservation road construction in recent legislation popularly known as the Gas Tax Act. (P.L. 97-424).

[30] Ibid. See also U.S. Congress, House Committee on Small Business, *Oversight Hearings on Minority Participation in the SBA 8(a) Program*, June 14, 1982.

CHAPTER II—THE TRIBAL EXPERIENCE

Any study which proposes to make concrete recommendations for the improvement of the economic condition on Indian reservations must be made against the historical backdrop of tribal dependency resulting from a century of colonial rule under the Federal Government. Without this backdrop, it would be understandable for anyone not familiar with Indian history to arrive at naive conclusions and simplistic solutions.

From the historical point of view, the greatest deterrent to economic development and growth in Indian country has been the implementation of the *manifest destiny* doctrine, including the self-fulfilling prophecy that Indians would disappear through physical and cultural attrition and make way for U.S. expansion.[1] Through much of the 19th Century, including the end of the treaty-making era to the 1930s, federal Indian policy had been devised to speed up the process of manifest destiny. The chart below illustrates the continuity of that policy through the years:



It is well known that Indian tribes suffered the loss of land rights in excess of $100 million acres during this period.[2] These losses occurred through treaties forced on Indian tribes which extinguished tribal rights to aboriginal homelands. After the Cession of Treaties decreed by the 1871 Act of Congress, separate statutes further opened up Indian land areas for homesteading. Finally, the 1887 Dawes Act authorized the sale of land to individual Indians.

It is not difficult to see how Indian preoccupation with the survival of their tribes and the protection of their lands against these forces has left little time and resources for development. In fact, through the 1950s and 60s, the threat of termination drove tribes regressively deeper into a dependency attitude. In his *Indian Message* of 1970, President Nixon recognized this cause and effect; ". . . the mere threat of termination tends to discourage greater self-sufficiency among Indian groups."[3]

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[1] American Indian Policy Review Commission, "The Economics of Indian Country," Chapter Seven, *Final Report*, Volume I, May 17, 1977 (Washington, D.C.: Government Printing Office, 1977) pp. 305-307.

[2] K. Kickingbird and K. Ducheneux, *100 Million Acres* (New York: McMillan, 1973).

The periods of New Frontier and Great Society programs brought federal development assistance to Indian country at unprecedented levels. However, the inherent inefficiencies and uncoordinated administration of those programs took away much of the potential impact of these financial infusions.[4] Accounts of these inefficiencies are well-documented in reports of the General Accounting Office, the American Indian Policy Review Commission, and from other private and independent sources.[5] It must also be remembered that the years of relative affluence in federal assistance were also years of massive social upheaval in America, including Indian reservations—conditions not conducive to development.[6]

Therefore, the absence of any significant levels of development on Indian reservations should be understood in the context of history; and an historical analysis is in order at the outset of any inquiry into the tribal experience at economic development lest one conclude that the tribal status constitutes an inherent obstacle to development.

Tribal governments and economic development

An understanding of the tribal experience in relation to economic development is equally important to an analysis of the federal role. Since a tribe functions as both the general purpose local government which also owns and controls the tribal resource base, this issue is particularly complex.

Traditionally, tribal governments have been viewed as public sector bodies with responsibility for an obligations to tribal members, including their economic and social well-being. In another sense, however, a tribal government may be considered a "quasi corporation," responsible for the investment of tribal resources, for managing those resources for the betterment of tribal members, and for ensuring that long-term obligations to tribal members can be fulfilled. Thus, the tribal council has particular financial and budgetary responsibilities, including:

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[3] U.S. President, Message, "Transmitting Recommendations for Indian Policy," H.B. Document No. 363, 91st Congress, 2nd Session, 1970.

[4] U.S. Congress, Joint Economic Committee, *Toward Economic Development for Native American Communities*, 91st Congress, 1st Session, 1969.

[5] American Indian Policy Review Commission, *Task Force Seven, Final Report on Reservation and Resource Development and Protection* (Washington, D.C.: Government Printing Office 1967). Other studies include:

General Accounting Office, "More Federal Efforts Needed to Improve Indian's Standard of Living Through Business Development," (Washington, D.C.: GAO, 1978).

M. Udall, "Indian Natural Resources Development Act of 1979."

General Accounting Office, "Better Overall Planning Needed to Improve the Standard of Living of White Mt. Apache of Arizona," (Washington, D.C.: GAO, 1975).

General Accounting Office, "Land Management Activities on Three Indian Reservations in S. Dakota Can be Improved," (Washington, D.C.: GAO, 1975).

General Accounting Office, "Indian Natural Resources—Opportunities of Improved Management and Increased Productivity," (Washington, D.C.: GAO, 1975).

General Accounting Office, "Expenditures Benefiting American Indians," (Washington, D.C.: GAO, 1975).

General Accounting Office, "Land Leases on Fort Hall Indian Reservation in Idaho," (Washington, D.C.: GAO, 1974).

U.S. Congress, Senate, "Financing the Economic Development of Indians and Indian Organizations," Hearing before Subcommittee on Indian Affairs, May 31, 1973.

General Accounting Office, "Increased Income Could be Earned on Indian Trust Monies Administered by the Bureau of Indian Affairs," (Washington, D.C.: GAO, 1972).

Joint Economic Committee, *Toward Economic Development for Native American Communities*, 91st Congress, 1st Session 1969.

[6] Vine Deloria, *We Talk, You Listen* (New York: Harper and Row, 1973).

- generating adequate revenue stream
- authorizing expenditures
- defining capital improvements
- making tribal investments

In a manner typical of most governments these activities are often done on an annual basis with little or no long-term projection. Management of tribal resources is too often viewed as a short-term venture, with incremental annual decisions where planning is keyed to the tenure of elected officials.[7]

This analysis suggests that a productive area to examine for federal initiatives would be identifying incentives that would encourage the separation of tribal management of private enterprises from the tribal government's public service organizational responsibilities. Such a separation, if combined with other steps, should not only work to support the ability of tribally-owned business enterprises to function on a more business like basis, but should also aid the tribal govenment to focus more attention toward its governmental functions.

Planning and development needs

As we have seen, prior to the 1960s, few tribal governments had much in the way of revenue and/or programs, and planning, development and management capabilities were not foremost in tribal council priorities. However, the rapid increase of federally-funded programs in the 1960s and 70s and the increasing responsibilities assumed under PL 93-638 for administration of BIA and IHS services placed an immense burden on tribes to improve their capabilities.

In addition, the new challenge to develop the reservation resources to achieve "self-sufficiency"—presumed by most to mean adequate *revenues* for the ongoing economic and social well-being of the tribal memberships, increases the urgency of tribal governments to effectively plan and market their reservation development potential.[8]

Over the past two decades, a number of federal agencies provided assistance to tribes for planning and development, among them OEO, HUD, EDA, and ANA. (See *supra,* Chapter One, "The Federal Role.") Although management skills and techniques became somewhat sophisticated over the years, the practices and priorities of the separate local programs have tended to mirror those of the parent federal funding sources. As documented in studies by the BIA and DOL, "federal program management at the tribal level were generally preoccupied with grant contract compliance rather than with progress in an interlocking network of programs operating in tandem with tribal developmental goals." In order to safisfy the federal funding agencies in their accounting and reporting requirements, and federally-defined goals (often reflecting competing interests of the parent programs), the local tribal programs seldom coordinated among themselves toward overall tribal development.

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[7] "Operational Considerations in the Organization of Indian Business Enterprises," (Tucson, Arizona: Office of Arid Land Studies, University of Arizona, June 1981).

[8] U.S. Congress, Senate Select Committee on Indian Affairs, *Oversight Hearing on Indian Economic Development,* April 29, 1982.

With the massive budget cutbacks in FY '81, federal assistance for reservation development planning has been decimated and many tribes are consolidating the various planning-related functions. Reportedly, many tribes are also subsidizing planning functions with tribal funds. The Administration for Native Americans in HHS is holding out its rather limited funds as incentive for tribes and communities to centralize and coordinate their social and economic development planning. ANA's Social and Economic Development Strategy (SEDS) program is seen throughout Indian country as an effective program which initially challenges the tribes to organize their planning and strategy capabilities, yet refrains from bureaucratic interference in the tribes' priorities or operations thereafter.[9]

However, although the budget cutbacks appear to have eradicated duplications in tribal planning functions, the need for financial and technical assistance for strategic, project-oriented planning is even greater in view of the need to expedite economic growth and investments for reservation development. Federal assistance, perhaps patterned after the successful aspects of ANA's SEDS program by targeting specific management and planning needs, should yield results.

The tribal enterprise

Many tribal governments own and, through various arrangements of council committees and boards of directors, manage enterprises of varying degrees of scale. The enterprises range from retail stores to major resorts, and include manufacturing, lumber milling, agribusiness, fishing and food processing, and construction.

There are some successful profitable tribal enterprises providing secure employment for tribal members and generally contributing to the tribal goal of self-sufficiency. But these are few. At a recent meeting of the American Indian National Bank (March '82) designed to "showcase" successful tribal enterprises, the common ingredients to success appeared to be: (1) management systems that provided for independence of action from political considerations; (2) effective marketing strategies; (3) adequate capitalization; and (4) an established reputation among the buyers and suppliers that the enterprise dealt with:[10]

Tribal enterprise has its fundamental justification and is important to the reservation development scheme. Often the tribe is owner of the lands and resources being exploited in the venture. And it may be the major investor in the venture. In addition, tribal enterprises are often the only way to secure needed federal assistance for the reservation development enterprise.

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[9] U.S. Congress, Senate Select Committee on Indian Affairs.

[10] American Indian National Bank, *Indian Economic Development: Survival in the 1980s*, (Denver, Colorado: AINB, March 1982).

Most federal agencies or programs, by virtue of the federal trust responsibility to tribes and the government-to-government relationship with tribes, are restricted from providing direct financial assistance to reservation projects not owned by the tribe. Although there are exceptions such as the SBA and MBDA which target assistance toward individually-owned businesses, their record of participation by Indians is marginal. Where their assistance has been effective, the impact on tribal economies is minimal since the beneficiaries are largely Indian-owned enterprises located in urban areas. This suggests two areas for attention: first, modifying the eligibility criteria for federal assistance which, under existing law, must be provided directly to tribes to make possible directing such assistance to the tribal enterprise itself; and second, exploring the possibility of direct assistance to tribally-owned enterprises which is now being provided to individual Indian entrepreneurs by such agencies as MBDA and SBA.

Tribal ownership and leasing

In contrast to the marginal and sometimes ill-managed tribally-owned and operated industry is reservation-based business developed under terms of a lease agreement wherein ownership in the enterprise remains with the outside developer. Tribes and individual Indians are the beneficial owners of resources held in trust by the federal government. In the name of a "prudent fiduciary," there has existed in the Bureau of Indian Affairs a propensity to support lease arrangements with outside interests to develop Indian reservation resources, including timber, agriculture, and energy.[11] Where this attitude has been present, the lease arrangement has been viewed as assuring the most favorable returns on Indian resource development ventures since, the trust relationship implies as its corollary, incompetence on the part of the Indian trust beneficiary.

Only in recent years have a few tribes succeeded in negotiating joint venture agreements to develop natural resources which provide some of the benefits of ownership to the tribal partner. In the minerals development area, federal legislation is now pending which would enhance tribal joint venturing. (Senate Bill #1894 has passed both the Senate and the House and has been signed by President Reagan.) But for the great majority of cases, what is needed is simply a stronger, more skilled bargaining position on the part of the tribes.[12]

Management of Indian Tribes

The management challenge for Indian Tribes is one of gaining experience as well as establishing a structure and system of management that allows for independence of their business enterprise from political influence and bureaucratic interference. The lack of high-level management capability has been identified as a major obstacle to accessing credit and attracting investors.[13] Because tribal enterprises are established for the development of tribally-owned resources and involve a majority tribal investment, it is often difficult to persuade tribal councils to relinquish control to an independent board of directors or management team.

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[11] American Indian Policy Review Commission, *Task Force Seven, Final Report on Reservation and Resource Development and Protection* (Washington, D.C.: Government Printing Office, 1976). See also Lorraine Ruffing, "Fighting the Substandard Lease," *American Indian Journal*, Volume 6, No. 6 (Washington, D.C.: Institute for the Development of Indian Law, 1980) pp. 2–8.

[12] American Indian Lawyer Training Program, *Summary of Proceedings on Seminar On Indian Natural Resource Law and Finance*, May 1979 (Oakland, California: AILTP, 1980).

Difficulties between tribal councils and their business enterprises may occur in a variety of ways. Typical symptoms of structure-related operational problems include:[14]

- Enterprises are not being allowed to purchase more goods for sale because their budget has been exceeded, even though this would prevent the enterprise from making additional sales.
- An enterprise is not allowed to lay off tribal member employees during slow periods to maintain a balanced employment level, even though the employees may be idle at the enterprise.
- A backlog of work in the tribal accounting office prevents the enterprise manager from receiving up-to-date information on the business, with resulting operational problems.
- The tribal accounting office does not pay bills promptly enough to take advantage of discounts. This raises costs for the enterprise and is beyond the enterprise's control.

In addition, tribal councils come under local political pressure to drain off tribal enterprise profits prematurely for tribal social programs or for distribution to tribal members as per capita payments, often at the sacrifice of capital improvements, enterprise expansion, or contingency reserves.[15]

These examples of tribal government/tribal enterprise management problems clearly illustrate the inherent conflicts of interest between political and business concerns. Improving the tribal system to allow adequate separation of business from local politics is essentially a local matter. However, a tribe can be expected to respond to incentives from government and private sector partners. Principal federal programs for tribal economic development assistance are beginning to require, as a condition for federal financing, that tribes produce evidence that tribal enterprises are insulated from political influence. Increasingly, Indian economic development seminars and conferences are finding the political-influence link a major impediment to development. Furthermore, a number of tribes are recognizing the criticism as valid and are putting into place the governmental and corporate mechanisms to help remedy the situation.

Image of tribes as business partner by business leaders

Studies over the past few years have effectively defined the problems that reservations confront in their attempts to attract business or to access private capital. A recent study on the applicability of enterprise zones on Indian reservations revealed private sector perceptions of Indian tribes which stand as impediments to investment and business relocation on reservations.[16] These factors, even though they may be wrong or do not reflect real situations in many cases, still provide a rationale for limits to the activities and the commitments made by businesses on reservation. The factors identified include:

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[13] John Little, *Development Financing Alternatives on Tribal Lands: The Lender's Perspective*, NADSAT (Tucson, Arizona: University of Arizona, November 1981).

[14] "Operational Considerations in the Organization of Indian Business Enterprise."

[15] Lorraine Turner Ruffing, "The Navajo Nation: A History of Dependence and Underdevelopment," *The Review of Radical Political Economics*, Volume 11, No. 2, pp. 25–43.

- *Lack of Awareness.* A significant barrier to economic development on reservations is the overall lack of awareness among business organizations of the opportunities that might be afforded by Indian tribes and their resources.
- *Uncertainty to Commitment.* Business representatives mentioned that many tribes seem uncertain about or even opposed to economic development because of traditional values or fear of adverse consequences of growth.
- *Propensity to Consume, Not Invest.* Some business representatives felt that tribes tended to consume any resources rather than holding a portion back for investment. This inability to accumulate capital signaled to them that there is a lack of commitment to projects because tribal capital resources are not offered.
- *Unstable Political Climate.* Because of frequent tribal elections and the role of the council in business decisionmaking, business leaders felt that there is a constant level of political activity that has to be taken into account in doing business on reservations.
- *Protracted Negotiations.* In doing business with tribes, business representatives felt that there would be protracted discussions and negotiations, and were wary of getting into time-consuming negotiations that might not lead to a completed deal.
- *Uncertain Business Relationships.* Representatives of firms are not certain of the conditions under which business is conducted with tribes. This uncertainty pertains largely to issues of contracts, collateral, taxes, sovereignty and jurisdiction, and tribal courts.
- *Poor Economic Fundamentals.* These relative economic disadvantages include lack of access, distance to markets, inadequate infrastructure, etc.
- *Shortage of Capital.* Many tribes have limited resources available for investment in projects for economic development. This is important, for such investments signal to businesses that the tribes' commitment to development is serious and well-intended.
- *Labor Force Requirements.* There are concerns about the character of the labor force available on the reservations, with low levels of skills and education in many cases. High absenteeism and high turnover rates were also mentioned as barriers.
- *Bureau of Indian Affairs Intervention.* Many businesses felt that the intrusion of the BIA in any business negotiation is not helpful and makes dealings with the tribes difficult.

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[16] *Applicability of Enterprise Zones to American Indian Reservations,* (Arlington, Virginia: Charles Trimble Company with Free Zone Authority Services and Karl A. Funke Associates, Inc., 1982).

> Having a third party participating in negotiations can become cumbersome and counterproductive.

This sampling of opinions held by business leaders also suggests the possibility for federally-sponsored initiatives designed to improve communications between Indian tribes and the business community. With minimal expense, assistance to arrange open forums that would bring leaders and technicians from both groups together to exchange views and information should prove successful if initiated at a high-level. This proven method for government action could be a vehicle to convey attractive business opportunities to the corporate representatives while informing Indian representatives of the expectations and business practices which are prerequisites to sound business relations. In addition, when disputes between representatives and tribal leaders arise, the occasion for expert federal mediation assistance may expedite an appropriate compromise solution, paving the way for a profitable venture that otherwise was doomed to fail.

Venture appraisal needs

However, the removal of these impediments through corrective tribal government action or through effective, federally-assisted marketing is not the entire answer to reservation development. Nor should these private sector perceptions imply that reservations are rarely visited or approached by businessmen seeking opportunities for ventures. Tribal councils, particularly those with energy and mineral resources, are host to a legion of marketers annually, some with feasible proposals but most with questionable motives and prospects. This points up a related difficulty attributed to tribal government control of business development on the reservation—the need for better capability to assess venture opportunities. Reportedly, real opportunities have been lost, and some poor ventures undertaken as a result of inadequate assessment capabilities. Again, federal assistance targeted at the specific area of need, venture assessment, has the potential for high yields in terms of reservation-based project development rates of increase.

It is generally accepted that tribal capital investment and business development decisions are necessarily part of the tribal governmental process and that tribal governments need the best planning and development capability to make these decisions. Under any standard of organizational analysis, the distinction must be made between the policy role involved in reviewing a technical venture appraisal, and attempting to make active analysis. Tribal-elected officials are best equipped to represent those policy interests akin to a board of shareholders, weighing the pros and cons of major investment decisions in terms of broad impact. Assistance to them should be targeted at such an appropriate level.[17]

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[17] "Operational Considerations in the Organization of Indian Business Enterprises."

CHAPTER III—LEGAL QUESTIONS RELATING TO INDIAN RESERVATION-BASED ECONOMIC DEVELOPMENT

The unique, federally-recognized status of Indian tribes includes the following legal characteristics which are fundamental to any analysis of the potential for development of reservation economies:

- Indian tribes may establish general purpose local governments which are essentially independent of state law. Tribal governments are empowered to regulate commercial and business transactions involving Indians and which take place within their geographical/political jurisdiction.
- Indian lands and natural resources are held in trust by the Federal Government and as such are exempt from taxation. Trust property may not be sold or financially/legally encumbered except with federal approval.
- Indian tribes are immune from suit except when specifically authorized by Congress.

The following chapter will briefly examine these legal questions in order to identify their relevance to economic development issues.

Jurisdiction

Under federal law, tribal powers of self-government are derived from two basic categories, inherent sovereignty and Congressional delegation. Indian tribes possess certain inherent powers of self-government which the law recognizes as being based on the quasi-sovereign status they have enjoyed from time immemorial. Felix Cohen, the most well-known legal scholar in the history of Indian law, summarized the legal theories involved in the concept of inherent tribal powers as follows:

> Perhaps the most basic principle of all Indian law, supported by a host of (court) decisions . . . is the principle that these powers which are lawfully vested in an Indian tribe are not, in general delegated, but rather inherent powers of a limited sovereignty which have never been extinguished. Each Indian tribe begins its relationship with the federal government as a sovereign power, recognized as such in treaty and legislation. The powers of sovereignty have been limited from time to time by special treaties and laws designed to take from Indian tribes control of matters which, in the judgment of Congress, these tribes could no longer be safely permitted to handle. These statutes of Congress, then, must be examined to determine the *limitations* of tribal sovereignty rather than to determine its sources or its positive content. What is not expressly limited remains within the domain of tribal sovereignty. (F. Cohen, *Handbook of Federal Indian Law,* 122 [1942])

This fundamental concept of inherent tribal sovereignty continues to be the logical premise upon which contemporary court decisions and Congressional legislation is based. While Congress has overall acted more to limit rather than expand tribal powers, it may clearly delegate powers to Indian tribal governments just as it regularly does to states and other local governments. For example, Indian tribes may designate air quality standards under authority of the Federal Clean Air Act, contract for the delivery of federal services under the Indian Self-Determination and Education Assistant Act (25 USC 450), or regulate the sale and distribution of liquor on the reservation (18 USC 116). On the other hand, in the Non-Intercourse Act, Congress limited the authority of tribes to dispose of tribal lands and in the Major Crimes Act, the authority of Indian tribes to enforce criminal laws was significantly limited.

It is not necessary for purposes of this report to comprehensively list and comment on the full range of tribal powers. Although there are exceptions, Indian tribes generally possess those powers which are necessary to fulfill their role as general purpose local governments.

What is pertinent for this study is a review of existing law to define the scope of tribal authority to regulate commercial, corporate and trade activities and the relationship of this authority to state law, particularly as applied to non-members engaged in commerce within the reservation boundaries. As noted above, the appropriate legal proposition to begin such an inquiry is the principle of inherent tribal sovereignty enunciated by Felix Cohen in his 1942 treatise, *Federal Indian Law*. Cohen's analysis, in turn, is based on the 1934 Interior Department Solicitor's opinion entitled, "Powers of Indian Tribes," (55 ID. 14) which comprehensively reviewed the law as it had developed up to that time. In general, the Solicitor opined that the Indian tribes' powers of "internal" sovereignty are only limited by express acts of Congress and tribes' own actions, such as may be found in tribal constitutions restricting the authority of tribal governments. Among other powers, this includes, "the power to determine the tribes' form of government, eligibility for membership, police power over the activities of members, charter business enterprises, regulate commercial activity and to tax members and non-members."

Although the fundamental principle of inherent tribal sovereignty continues to be a viable starting point for such an analysis, contemporary court decisions have characterized this principle as a "backdrop" against which present day disputes are resolved. In short, the principle of inherent tribal sovereignty has not been regarded as dispositive of the type of issues contemplated in this section. Rather, when one contemplates the legal issues of tribal-state jurisdictional interaction one is confronted with some of the most disputed and litigated questions in the field of Indian law.

The courts and Congress have departed from the status of the law regarding tribal powers of government in Cohen's day in major ways. Perhaps the most significant action taken by Congress is adoption in 1953 of a statute commonly referred to as Public Law 280 which transferred a broad measure of criminal and civil jurisdiction over Indian tribes specifically to six states and authorized all others to assume the same degree of authority. [Public Law 83–

280 is codified at 28 USC 1360 and 18 USC 1162]. Subsequently, six additional states assumed varying degrees of jurisidiction over some or all of the tribes within their boundaries. (A comprehensive review and analysis of the P.L. 280 experience may be found in Carol Goldberg's article, "Public Law 280: The Limits of State Jurisdiction Over Indian Reservations," 22 UCLA L. Review 535 [1975].)

Public Law 280 expressly exempted from state jurisdiction authority to tax or encumber trust properties or regulate Indian hunting and fishing rights. However, until the Supreme Court's recent decision in *Bryan* v. *Itasca County* 426 U.S. 373, (1976) it had been assumed that State P.L. 280 civil jurisidiction included authority to tax transactions involving Indian personal property as well as regulate land use activities. However, the *Bryan* case significantly narrowed the scope of state civil authority to "adjudication" of civil disputes. Moreover, recent case law authority stands for the proposition that this "adjudication" authority is only concurrent with and not exclusive of tribal civil jurisdication. (See, for example, *Confederated Tribes of the Colville Reservation* v. *Beck* [E.D. Wash.] Dec. 21, 1978.)

In 1968 Congress enacted the Indian Civil Rights Act (25 USC § 1301 et seq.) which required that Indian tribal governments comply with a modified form of the Bill of Rights in the exercise of their powers of self-government. Although this law was thought to confer authority on the federal courts to review tribal actions against the standards set out in the Indian Civil Rights Act, the Supreme Court's decision in *Santa Clara Pueblo* v. *Martinez*, 436 U.S. 49 (1978) limited federal court review to habeas corpus petitions. Consequently, although tribal regulation of business transactions on the reservation are subject to the provisions of the ICRA, assertion of such rights are largely constrained to available tribal judicial and legislative forums. This conclusion was recently affirmed by the 9th Circuit Federal Court of Appeals in *Trans-Canada Enterprises, Ltd.* v. *Muckleshoot Tribe*, 634 F.2d 474 (9th Cir. 1980). The court correctly interpreted the holding in *Santa Clara Pueblo* v. *Martinez* as only authorizing federal courts habeas corpus jurisdiction in suits against tribes. A U.S. District Court ruling had incorrectly used *Santa Clara* as authority to prohibit enforcement of a tribal business licensing ordinance against a non-Indian corporation. The 9th Circuit, recognizing the error, reversed the District Court thereby affirming both the principle of tribal jurisdiction over such matters as well as the limits of federal court jurisdiction over Indian tribal actions.

Independent of Congressional action, the federal courts have (as one may have assumed) dealt with state-tribal conflicts not simply on the basis of the theory of inherent tribal sovereignty. Rather, beginning with lead cases of *Williams* v. *Lee* 358 U.S. 217 (1959) and *Warren Trading Post Co.* v. *Ariz. Tax Comm.* 380 U.S. 685 (1965) the courts have adopted dual theories referred to as the "infringement test" and "preemptive federal jurisdiction". Briefly, the courts examine the tribal-state jurisdictional conflicts to determine whether the assertion of state power either "infringes on the rights of Indian tribes to govern themselves," or "intrudes into an arena of government action that had been preempted by the assertion of federal authority." For example, in the *Warren* case, the federal Indian trader laws (25 USC 261 et seq.) were viewed as preempting Arizona's attempt to levy taxes on transactions involving a licensed Indian trader doing business on the Navajo reservation.

While this analysis is grossly over-simplified, especially in light of more recent cases interpreting *Williams* and *Warren*, the point is that the results of subsequent law suits dealing with the clash of tribal and state authority over commercial and business transactions involving Indians on the reservation will be very unpredictable. Even though assertion of tribal authority over such matters may be upheld in the courts, there is no assurance that such authority will be exclusive of state authority. The trend would appear to be in the direction of a case-by-case delineation of tribal jurisdiction where evidence of careful tribal regulation along with the connection of the activities to uniquely tribal interests is weighed against the state's traditional interest in regulating non-Indian activities.

Trust status of Indian lands and resources

The legal title to Indian lands and natural resources resides in the United States as trustee while the tribe or individual owner, as the case may be, possesses rights of occupancy and use as beneficial owner. For purposes of this discussion, the basic characteristics which result from this relationship are that trust lands and resources cannot be sold, conveyed, or otherwise legally encumbered (e.g., taxed, mortgaged, etc.) without the express approval of the trustee. Under its Constitutional authority as derived from the Commerce Clause, Congress may, by statute, terminate this trust status or authorize the executive branch to approve the sale, lease, conveyance or development of trust resources. However, in the absence of an express authorization by Congress, neither the executive branch nor state or tribal governments are empowered to dispose of or otherwise place restrictions on trust resources. As noted above, this has been interpreted to include the imposition of federal, state and tribal taxes on trust property and on income directly derived from trust resources by the beneficial owner as distinguished from a lessor or other third party.

Perhaps the best analysis of the trust doctrine may be found in Reid Chambers' article on "Judicial Enforcement of the Federal Trust Responsibility to Indians." 27 Stan. L. Rev. 1213 (1975). These sweeping restrictions pertaining to Indian lands date back to the actions of the 1st Continental Congress and its passage of the 1790 Indian Non-Intercourse Act which has since been codified at 25 USC 177. Subsequently, treaties between the U.S. and various tribes have been interpreted as embodying a self-imposed duty of protection toward Indian lands and resources on the part of the Federal Government.

Over the years, complicated procedures for the sale of lands allotted to individual Indians as well as the leasing of Indian lands for grazing, agriculture, forestry development, mining, recreation and other purposes have been codified in federal law and extensive regulations developed (see, for example, 25 USC 415—leases of restricted lands for public, religious, educational, recreational, residential, business, and other purposes). The Secretary of the Interior and his designees administer these laws and regulations through a network of national, regional and local offices, the net effect of which is to insure that all Indian land-related transactions are closely, although not always competently, supervised.

The provisions of Indian trust laws which are pertinent to our inquiry relate to the terms and conditions applicable to the use of Indian trust land for business ventures. Since only land allotted to individuals may be sold, and only then under closely regulated conditions (25 USC 404, 405), the use of federal leasing authority represents the primary alternative for developing of reservation-based business projects. Assuming that development of a reservation would involve the construction of buildings and other permanent improvements to the land, the rights of individual entrepreneurs and investors in the land and fixtures must be long-term and secure. Without such security, the financial risk would be simply too great except for very specialized kinds of enterprises. Relevant federal regulations (25 CFR 131 et seq.) provide that trust land may be leased for business purposes but such leases ". . . shall be limited to the minimum duration, commensurate with the purpose of the lease, that will allow the highest economic return to the owner consistent with prudent management and conservation practices, and except as otherwise provided for this section (e.g. 25 years) . . . unless the consideration for the lease shall provide for periodic review, at not less thant 5 year intervals, of the equities involved . . . (such leases) shall not exceed 25 years but may include provisions authorizing a renewal or an extension of one additional term of not to exceed 25 years, except (a listing follows of reservations regarding which Congress authorized a waiver of the 25 year limit, usually for a period not to exceed 99 years)"—25 CFR 131.8.

The leasing regulations go on to provide that "improvements placed on the leased land shall become the property of the lessor unless specifically exempted therefrom under the terms of the lease." (25 CFR 131.9) and, ". . . a sublease, assignment, amendment or encumberance of any lease or permit issued under this part may be made only with the approval of the Secretary and the written consent of all parties; (but) the lease may contain provisions authorizing the lessee to encumber his leasehold interest in the premises for the purpose of borrowing capital for the development and improvement of the leased premises. The encumbrance instrument must be approved by the Secretary." (25 CFR 131.12)

For purposes of analyzing the practical effects of these legal considerations, the following discussions will examine the impact on a development project such as a shopping center complex or industrial park.

We assume, for example, that the potential tenants or occupants of an Indian reservation-based development complex could include, but not be limited to the following categories:

- Individual proprietors, Indian and non-Indian
- Tribally-chartered or created enterprises in which the controlling ownership interest resides in the tribe
- Corporations chartered or doing business under tribal authority but not owned by the tribe
- Corporations chartered under other than tribal law doing business entirely within the reservation

- Subsidiaries, franchises or concessions of corporate entities whose primary operations and residence are not on the reservation

Regardless of the type of enterprise or the corporate status, the major obstacle posed by Indian land leasing laws would appear to be the limited term of years authorized under the law and regulations for such leases. Unless the business is established on one of the small number of reservations for which 99-year leases have been authorized, a lease for business purposes is limited to 25 years with a possibility, but not a right, to renew for an additional 25-year term. While other requirements, such as the surety rule (25 CFR 131.5(c)) appear to be waiveable by the Secretary, the 25-year term limit does not. This limit would obviously be of greatest concern to business operations requiring significant capital investments in the form of improvements and fixtures. However, even smaller businesses where the start-up costs are nominal may be greatly inhibited if they could not be assured of longer term option rights.

An additional consideration which could increase the financial risk involved stems from the fact that a leasehold interest, as contrasted with a fee interest, except for special circumstances, is simply not as useful for purposes of collateral. Lending institutions and investors are traditionally reluctant to accept a leasehold interest which is not readily transferable and for which there may be only a limited market. Although, as a practical matter, the same limits may apply to fee land within a reservation, lending institutions are much more comfortable with a known quantity, i.e., mortgages, assignments and liens.

The above discussion is premised on the assumption that a proposed development would be situated on tribal land compared to allotted or fee lands within a reservation. Further, the assumption is also made that no unusual purposes are contemplated for the land which would call into play other "trust law" considerations (e.g., mineral development on the basis of a joint venture, significant demands for ground water, or public purpose right-of-way, condemnation actions for rail, road or power lines). There would appear to be several management advantages as well as possible tax and jurisdictional advantages in situating a development on tribal lands. For example, securing the consent of sometimes multitudinous allotment owners could be avoided and the decisional law would seem to favor a tribe's legal argument for assertion of exclusive tribal jurisdiction based on the fact that its vital economic interests are at stake if tribal (versus fee lands) are involved. (See *U.S.* v. *Montana*, 450 U.S. 544, 1981).

Despite the potential limits on a development project stemming from the 25-year limit on trust land leases, our preliminary conclusion is that an amendment to trust status law is not called for. Many tribes have successfully attracted the type of enterprises contemplated for such a development to reservations under existing law. It lies within the discretion of federal executive branch policy makers to facilitate leasing in a development within the parameters of existing law. One should be able to validly assume that the Administration could make it a priority to cooperate with tribal economic self-sufficiency initiatives as represented in such a proposal and existing law would allow Secretarial discretion in expediting the approval of leases which are part of a development.

Perhaps the most crucial item would be the artful drafting of provision for an extension of the lease which would favor the lessee and have the effect of recognizing an enforceable option to renew. Interior Department officials with extensive experience in such matters should be consulted on this issue for a more definite interpretation of the provision in question (25 CFR 313.8(a)).

In our view, the available literature on Indian economic development trends leads us to conclude that Indian trust land restrictions as represented primarily in the leasing laws, have not been a major causative factor of Indian tribal under-development. While these limits have undoubtedly had some inhibiting effect on potential developers, investors, and creditors, adequate land tenure rights are available under existing laws, particularly where the economic environment for the enterprise in question is favorable and experienced individuals are involved. In short, the suggested trade-off of taking the land out of trust in order to facilitate or stimulate the economic conditions simply does not seem justified or necessary based on the law and the historical record.

Indian tribal sovereign immunity

This section reviews the relevance of the doctrine of sovereign immunity from suit as it pertains to tribes and tribally-chartered corporations. When considering participation in business ventures, Indian tribes must carefully consider both the benefits and the liabilities which flow from such participation. It is the purpose of this section to review the status of the law, extrapolate a trend from the available judicial decisions, and draw conclusions as to probable consequences and legal ramifications of waiving tribal sovereign immunity to the extent necessary to conduct business with outside business entities.

The three major aspects necessary for review are:

1. The sovereign immunity from suit of a tribe when it acts as a government in establishing a development project.
2. The sovereign immunity doctrine as it applies to a tribally-chartered business corporation and subsidiary tribally-chartered corporations operating within the reservation.
3. Application of the sovereign immunity doctrine when a tribe operates both as a government as well as when it authorizes the establishment of tribally-chartered business corporations independent of the Indian Reorganization Act of 1934 (48 Stat. 984; 25 USCA § 461–479).

It is a well established principle of law that Indian tribes, as sovereign entities, are immune from suit. (*U.S.* v. *U.S. Fidelity and Guaranty Co.,* 309 U.S. 506 (1940); *Thebo* v. *Choctaw Tribe,* 66 F. 372 (8th Cir. 1895); *Maryland Casualty Co.* v. *Citizens National Bank of West Hollywood,* 361 F.2d 517 (5th Cir. 1966); *Puyallup Tribe* v. *Dept. of Game,* 433 U.S. 165 (1977).) Such immunity may be waived, either by Act of Congress or by the tribe itself under authority of federal law.

Judicial decisions have consistently held that this immunity an attribute of inherent tribal sovereignty, is not subject to attack so long as the tribe, acting as a government, asserts its immunity as a defense.

> Indian nations, as an attribute of their quasi-sovereignty, are immune from such, either in the federal or state courts, without Congressional authorization. *Maryland Casualty, supra,* at 520.

Individual tribal members, however, are not protected by the doctrine when acting as individuals, but are protected by the doctrine when acting in their capacities as tribal employees and officials. Thus, the status of the sovereign immunity of a tribe is at this point equal to that enjoyed by states and the federal government.

For purposes of the immunity issue, courts make no distinction between a tribal government performing proprietary or governmental functions.

> The fact that the Seminole Tribe was engaged in an enterprise *private or commercial* in character, *rather than governmental,* is not material . . . The Supreme Court has not hesitated to hold the immunity applicable in actions for liabilities arising out of private transactions. *Maryland Casualty, supra,* at 521-22. (Emphasis added.)

Tribal immunity from suit is therefore more extensive than that of states and the Federal Government because tribes have not generally waived immunity, as many states and the Federal Government have, on specific issues. This does not mean, however, that tribes are incapable of authorizing a limited waiver of their immunity to induce the participation of non-tribal business firms in a venture or business relationship.

As we have seen, limited waiver of tribal immunity from suit may be a necessary prerequisite to a tribe participating in an on-reservation business venture. The line of cases examined above indicates an absolute immunity of the tribal government, absent affirmative tribal, Congressional or other federal waiver. Less clear from the decisions is the effectiveness of an aimplied waiver. Further uncertainties arise on the issue of express tribal consent. The question then becomes to what extent may the tribe itself waive its sovereign immunity from suit.

The Indian Reorganization Act (IRA), *supra,* served to redirect the federal perspective on U.S.-Indian relations. Passage of the Act recognized the sovereignty which Indian governments inherently possessed. As such, the IRA was not a grant of power to the tribes, but a federal recognition that those powers of self-government already existed. It attempted to induce Indian governments to adopt a limited version of the American Constitutional form of government. It has also been interpreted to acknowledge that tribes possess other governmental powers beyond those enumerated in the IRA, so long as those powers had not been terminated by either federal law or treaty.

Section 16 of the Act (25 USCA § 476) authorized tribal councils to establish constitutions, and allows for tribal input into the Secretary of the Interior's decision-making process when it affects the rights of the tribe and its members. Section 17 (25 USCA § 477) provides for the incorporation of a tribe after ratification of a corporate charter in a special tribal election. The tribal corporate charter allows, among its enumerated powers, the following:

> . . . such charter may convey to the incorporated tribe the power to purchase, take by gift, or bequest, or otherwise, own, hold, manage, operate, and dispose of property of every description, real and personal . . . and such further powers as may be incidental to the conduct of corporate business, not inconsistent with law, but no authority shall be granted to sell, mortgage, or lease for a period exceeding ten years any of the land included in the limits of the reservation . . .

An opinion of the Solicitor of the Department of the Interior (M-36119, February 14, 1952) addressed the issue of the extent of the power to make and perform contracts and agreements under Section 17 of the Act. The Solicitor stated that:

> It seems to be clear that section 17 permits the Secretary to grant to incorporated tribes far-reaching powers with respect to the conduct of business activities, including the making and performance of tribal contracts, and that the Secretary is subject, in this regard, only to the limitations expressly stated in the section . . . (It) is a purpose of incorporation to provide the means for the conduct of business activities in a business-like way . . .

It is apparent that the IRA was intended to encourage tribes to incorporate, and once incorporated, to conduct business activities in much the same way, and with many of the same powers as any other business corporation.

The basic theory enunciated in earlier court decisions to the affect that express Congressional consent is necessary before a tribe or tribally-chartered corporation may waive its sovereign immunity has been modified. The underlying rationale for such a trend is the recognition that Indian tribes are not arms of the Federal Government, but separate, semi-sovereign governments.

In *Maryland Casualty* v. *Citizens National Bank of West Hollywood, supra,* the court examined the ability of a tribal corporation chartered under 25 USCA § 477 to waive its immunity to a limited extent. Section 9 of the charter allowed the Seminole Tribe to sue or be sued, but excluded from the waiver the power to levy a judgment, or execute a lien or attachment upon any of the property of the tribe. Based upon the waiver as well as the rule of liberal construction that doubtful expressions be construed in the tribes' favor (See *Squire* v. *Capoeman,* 35 U.S. 1 (1956)), the Fifth Circuit found that the tribe was immune from garnishment proceedings, and thus validated the limited waiver found in the tribal corporate charter.

In *Namekagon Development Co.* v. *Bois Forte Reservation Housing Authority,* 516 F.2d 508 (8th Cir., 1975), the Eighth Circuit affirmed the decision of the U.S. District Court, Fifth Division, Minnesota. The district court concluded that a tribally-created subsidiary corporation may be held liable for a contract violation while the tribe which authorized the subordinate corporation retained its sovereign immunity from suit. Basing its decision on the analogy that federally-created corporations do not acquire the sovereign immunity of the United States unless the law creating such corporations expressly conferred immunity, the court held that the Bois Forte Housing Authority could be sued despite the fact that both the Tribe and the Bois Forte Business Committee, a tribal governing body, were immune from suit. A tribal ordinance created the housing authority and included a clause which stated:

> The Council hereby gives its irrevocable consent to allowing the Authority to sue and be sued in its corporate name, upon any contract, claim or obligation arising out of its activities under this ordinance. (395 F.Supp. at 27)

The court found this waiver sufficiently clear on its face to waive any liability which might otherwise accrue to the tribe. Further, the court discussed the power of the Business Committee to create a limited purpose corporation and found that the Business Committee had that power. Citing *Turner* v. *U.S.*, 248 U.S. 354 (1919), Felix Cohen's *Federal Indian Law,* and Cohen's discussion of *Thebo* v. *Choctaw Tribe,* 66 F.372 (8th Cir. 1895), the court indicated that either tribal or Congressional consent was necessary before a tribe may be sued.

Finally, the Court in *Bois Forte* stated that ". . . the power to waive immunity is inherent in the power to assert it." 395 F.Supp. at 28. In its holding that an IRA §477 tribe can waive its sovereign immunity, the court in *Parker Drilling Co.* v. *Metlakatla Indian Community,* 451 F.Supp. 1127 (1978) reached the same conclusion. (See also *Atkinson* v. *Haldane,* 569 P. 2d 151 (Alaska 1977).

In a number of decisions, courts have held that tribal power to waive immunity exists as a necessary incident of their ability to conduct business as a corporate entity. Such a waiver should not be seen as blanket authority to endanger tribal trust assets. The "limited" feature of any tribally-proferred grant of the right to be sued should stop short of any possible encumbrance of trust assets. Such limited purpose, tribally-chartered or authorized corporations should be able to effectively enter into a conventional business relationship. Narrowly-drawn tribal waivers of immunity should also withstand strict judicial and Secretarial scrutiny.

A similar conclusion must be reached when analyzing the status of Indian tribes which have elected not to organize under IRA. Today, fewer than 50 percent of all federally-recognized tribes are IRA chartered. Yet, virtually all of these tribes operate tribal governments of varying degrees of complexity to the satisfaction of the Secretary of the Interior and many other federal entities. If it possesses sufficient "federal attributes," a non-IRA tribe should be subjected to the same judicial scrutiny as an IRA tribe. By logical extension of this premise, if it is found to be an effectively functioning tribal government, it must be found capable of exercising its right to waive, to a limited degree, tribal sovereign immunity. Consequently, there is little basis to make a distinction between IRA and non-IRA tribes for purposes of evaluating participation in business ventures.

As an alternative to such "waiver of immunity" steps, tribes may also consider contracting with an insuror to assure liability to the satisfaction of potential business partners. Tribes chartered under the IRA may wish to amend their charters to provide for limited liability through an insuror as an alternative.

In conclusion, we note that as sovereign, a tribe cannot be sued when it functions in its capacity as a government, absent an effective waiver of immunity. A tribe would be totally immune from suit when it operates as a unit of government in establishing a development, unless if effectively and voluntarily consents to a limited waiver, or otherwise contractually obligates itself to accommodate a business relationship. In any event, federal law would expressly prohibit a tribe from waiving immunity from suit for purposes of exposing to financial risk its trust assets. As a further limitation, any waiver of tribal sovereign immunity may contain an express proviso that pursuit of any judiciable issue shall be subject to the exclusive jurisdiction of the tribal court of that tribe, and that the decision of the tribal court is final.

Although the trend in recent years has been away from a strict interpretation of the requirement of express Congressional assent for a limited waiver of tribal sovereign immunity to be valid, there may still be room for questions on this issue. Courts have been examining the purposes of the waiver, impliedly considering the equitable grounds for allowing a valid waiver, and applying general corporate business principles to their analyses of the cases brought before them. The tribe as a business corporation, or certainly as a tribally-chartered subsidiary corporation has been successful in creating a limited waiver of tribal sovereign immunity under conditions that demonstrate that immunity has been knowingly and validly waived. The trend in federal cases has also been to downplay distinctions between IRA tribes for the purposes of creating tribally-created, limited purpose corporations. IRA and non-IRA tribes may be held to the same standards when analyzing the extent of their powers, including the ability to waive sovereign immunity. However, without the tool of limited waiver of sovereign immunity, Indian tribes may be restricted in their efforts to develop and participate in successful business development projects.

In summary, there appears to be a real value in efforts to resolve legal uncertainties surrounding the question of who has jurisdiction over business and commerce on the reservation which involves non-Indians. From a business owner's point of view, such uncertainties may serve as a disincentive to commit resources to projects that may be subject to dual taxation or conflicting regulatory claims between state and tribal governments. As noted above, developments in the law appear to be reinforcing the state's traditional prerogative to exercise authority over non-tribal members where no tribal or federal interest is involved. However, tribes have a clear interest in asserting regulatory and taxation authority which would enhance their economic position as well as enable them to offer incentives for business development by non-Indians.

It is not difficult to justify a federal interest in resolving these legal uncertainties through supporting the tribes in creating an economic climate favorable to private enterprise development. Thus, a worthy initiative which the administration may wish seriously to consider lies in the area of tribal business law development. Nearly all tribes lack the most basic business licensing, incorporation and regulatory laws which would protect the legitimate creditor, investor and consumer interests of Indian and non-Indian. Such law development, if coupled with adequate enforcement capabilities, could not only create a favorable environment for private enterprise growth on reservations but also strengthen a tribe's legal position in the face of competing or conflicting state government jurisdictional assertions. Or course, careful consideration needs to be given as to how federal assistance and support in this area could be accomplished most effectively and with economy of resources.

CHAPTER IV—CAPITAL AND FINANCING

Nearly all informed observers and commentators have identified the difficulty in accessing capital as an overriding problems inhibiting economic development in Indian country. This includes development capital as well as commercial financing for business projects. For all but a few economically-advanced tribal communities, the access to and integration with financial markets is simply non-existent.[1] However, although "access to capital" is a problem with consensus priority in all sectors of Indian economic development advocacy, the more fundamental problem is the absence of financial structure which would allow for capital formation *within* Indian communities.

Little credit intermediations or savings institutions of any kind exit within Indian reservations. There are virtually no savings and loan associations, mutual savings banks, finance companies, investment companies, real estate investment trusts or insurance companies. Thus, capital flows out of the reservations to the non-Indian "bordertowns," and is not multiplied within the reservation economies. The sometimes large demand deposit accounts of tribal governments or tribal programs are necessarily handled in off-reservation banks, and millions of dollars in Indian trust funds are invested in money markets throughout America. If tribal governments and individuals are depositing, conducting payment transactions, and investing in money market instruments via financial institutions outside of reservation economic systems, it follows that there are few opportunities whereby savings can accumulate indigenously.

Recent studies addressing the problems of tribal economies, particularly those of Sioux Indian economist Robert W. McLaughlin, who has characterized the reservation as a "capital desert," are attributing the phenomenon to the pervasive dependency of reservation life on publicly funded subsidies and the non-bank intermediation of federal assistance program administration.[2] These factors must be taken into account to fully comprehend the Indian reservation economic situtation.

Eric Natwig, in his report on *Institutional Barriers to Financing Development Projects in Indian Country,* discussed the reservation economic contexts:

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[1] John R. Brown, "Report on the Economic Development Needs Assessment Survey," *Initatives in Development Finance: Creating an American Development Finance Corporation,* Vol. I (Albuquerque, New Mexico: American Indian Development Corporation, 1982). See also American Indian Policy Review Commission, *Task Force Seven, Final Report on Reservation and Resource Development and Protection* (Washington, D.C.: Government Printing Office 1967).

[2] American Indian Policy Review Commission. See also Robert W. McLaughlin, "Notes on Indian Economic Development," Ft. Yates, North Dakota: Standing Rock Sioux Tribes, March 1982 (revised draft).

> Generally, Indian reservations are located on lands which possess marginal resource bases remote from major markets. Indian management skills are underdeveloped; entrepreneurship of any significance is only recently emerging. Physical infrastructure is underdeveloped or nonexistent. Capital accumulation has been very limited and capital is unevenly distributed among tribes.[3]

Reportedly, even when tribes have established fairly sophisticated shopping centers to serve reservation markets, many people (particularly federal employees who comprise a significant portion of the reservation markets) would do their weekly shopping off the reservation to take advantage of the availability of liquor, bowling alleys, golf courses, and other amenities not found on most reservations. Of course this consumer behavior pattern is also found among non-Indian rural communities.

Accessing credit and commercial financing

Commercial lending institutions have reportedly operated on the premise that there are extraordinary financial risks involved in commercial lending to reservation-based business enterprises. Although sources and amounts are limited, individual Indians have been much more successful in securing funds through commercial lending insitutions near the reservations than tribal enterprises; and consumer credit has far outweighed business loans to individual Indians. Availability of such financing is hindered by two uncertainties from a commercial lender's perspective: (1) trust status of most real property and (2) jurisdiction of debtor and security interests.[4]

Commercial lenders require collateral for their loans. The lack of authority for tribes or individuals to use their land, their main asset, as security, requires that they must pledge other assets. Primary sources of collateral that lenders have indicated they will accept are certificates of deposit assigned to the bank or assignment of lease rental income collected by a third party. However, even if such sources of collateral were pledged, off-reservation lenders perceive reservation-based loans as risky for other reasons. Banks fear that in the event of a loan default, their recourse may be limited. If the tribe which is requesting a loan has not organized to the extent that it has a corporate charter, if cannot "sue or be sued," and a bank therefore could not recover a potential loss through legal action in court. Furthermore, off-reservation lenders who are not tribal members, are apparently reluctant to press their claims in tribal courts as they feel they would be at a disadvantage in tribal proceedings.

Among other problems noted by lenders is the expense of servicing loans to reservation Indians. These costs include those relating to the distance of reservations from lending institutions and the additional time required to properly monitor loans where management problems may be perceived to be at issue.[5]

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[3] Eric Natwig, "Institutional Barriers to Financing Development Projects in Indian Country," *Initiatives in Development Finance: Creating an American Development Finance Corporation*, Vol. I (Albuquerque, New Mexico: American Indian Development Corporation, 1982) p. 3.

[4] Ibid, p. 11-12.

[5] Ibid, p. 12.

For the reason noted above, loans to reservation Indians are generally considered to be high risk loans. In order to minimize risk, banks have required up to 100 percent federal loan guarantees. Because the bank's exposure has been reduced to only the administrative time taken to process loans, it has been reported that the banks had no incentive to properly monitor these loans, and this contributed to project failures. An official at the Bank of America stated that in light of the substantial reduction in federal loan guarantees, it was likely for his bank that loans to Indian ventures, among other minority loans, would be curtailed.[6]

While commercial-lending institutions' reluctance is justified in part, a major cause is a perception in the industry that is based on misinformation or on lack of knowledge of alternative ways to secure such financing.

The American Indian National Bank (AINB) has specialized in reservation based financing for Tribal enterprises and has pioneered a number of lending techniques that offer promising alternatives.[7] Naturally, AINB's small size and distance from the reservations has limited its ability to expand financing service. However, it may be appropriate for the administration to consider sponsoring an information service directed at the banking industry to encourage their willingness to extend credit to Indian enterprises based on proven lending techniques that are viable alternatives to conventional forms of collateral and security interest protection.

Development financing

Sources of equity or development financing are urgently needed to complement commercial lending to Indian country. Business enterprise start-up costs need to be financed in ways that will not overburden the project during development phases. It has been pointed out that commercial banks are not appropriate to finance development projects, which require long-term financing because banks, in order to maintain liquidity, primarily loan for the short term.[8] According to Nancy Barbe:

> Banks provide the least desirable form of financing for a small growing firm. They provide only debt, the amortization of which reduces the ability of a small firm to reinvest profits and grow. Furthermore, shorter term financing sharply increases the debt service demands on a firm precisely at the time when their demands for capital are the greatest, further constraining the growth of small firms.[9]

"Venture capitalists," who provide longer-term investment capital, specialize in high-risk ventures and it would appear that this is a much better suited form of financing for reservation ventures. However, venture capitalists favor high technology, high return ventures with extremely fast growth potential with sound management. Reservation enterprises are generally conventional in nature and are thus less attractive. Experienced management is perceived to be lacking. Also the remoteness of reservations place them at a disadvantage in attracting venture capital, as venture capitalists generally concentrate on firms located close to their offices so they can maintain close advisory relationships with the enterprises they finance.[10]

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[6] Ibid., quoting "Personal communication with Cecil Byrd, Vice President, Bank of America, Los Angeles, California, April 13, 1981.

[7] American Indian National Bank, "Guidelines for Tribes and Tribal Businesses on Obtaining Bank Financing," *Indian Economic Development: Survival in the 1980s*, (Denver, Colorado: AINB, March 1982).

[8] Eric Natwig, p. 13.

[9] Ibid., citing Nancy Barbe, "Financing Rural Business: An Analysis of Sources of Long-Term Capital." Paper prepared for the National Rural Center, March 1980, p. 9.

Tribal funds constitute a source of development financing which has been used successfully by a small number of tribes endowed with significant income producing natural resources. Forestry and mineral resource development in particular has produced a source of tribal funds on some reservations which has been invested in Indian-owned business enterprises providing jobs and leveraging additional capital from private sources. The experience gained by such tribes as Warm Springs, Navajo, Yakima, Jicarilla, Apache, Shoshone, and others, to name only a few, is worth examining closely. Where such capital has been soundly managed and invested, a true measure of success has been gained. Unfortunately, the investment record of even "resource rich" tribes is not free of failure and the level of pressures of distribute such income to the tribal membership through per capita payments can be difficult to withstand. Moreover, there is a natural reluctance on the part of elected tribal officials to expose scarce capital resources to the risks associated with developing enterprises. As discussed earlier in this report (see Chapter III—"The Tribal Experience") tribal officials perceive a need to appraise project proposals in a more effective manner. Even if tribal funds can be successful leveraged to induce private sector investment, they are quite limited in relation to the need and once committed to a project they naturally lose their liquid status.[11]

These development finance investment concerns raise the questions of whether the selection criteria used to evaluate Indian economic development projects in the past has been adequate to meet the need. In a recently published work by Indian economist Dr. Ronald Trosper, it is suggested that the record of project development in Indian country reveals a preoccupation with narrowly-defined financial feasibility evaluation criteria and that this accounts in large measure for the relatively high failure rate.[12] Basing his analysis in part on the experience gained in less developed countries where economic conditions are strikingly similar to Indian reservations, Trosper concluded that effective project selections criteria must be much more sophisticated and comprehensive. That is, economic development in Indian country must be based on an accurate economic profile of the reservation that realistically identifies growth potential and also takes social cost-benefits into account. The Albuquerque-based American Indian Development Corporation has recently been engaged in field research to test Trosper's work through analysis of actual project proposals on selected reservations. The objective is to develop a workable model that can be used on a practical level by business development specialists. This suggests that an appropriate initiative for consideration by the administration would be to explore possibility of applying such project selection criteria methods to federally-financed assistance programs.

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[10] Ibid., citing Nancy Barbe, pp. 4-6.

[11] John R. Brown, "Report on the Economic Development Needs Assessment Survey."

[12] Ronald L. Trosper, "Guidelines for Project Evaluation on Indian Reservations," *Initiatives in Development Finance: Creating an American Indian Development Finance Corporation*, Vol. II (Albuquerque, New Mexico: American Indian Development Corporation, 1982).

Public financing

A proven method of economic development financing that has recently been the focus of attention in Indian affairs is the use of local government revenue bonds. States, counties and municipalities have marketed tax exempt revenue bonds to generate development funds that can be used to underwrite physical infrastructure costs associated with industrial parks, manufacturing plants, utilities, etc. The recently enacted Tribal Government Tax Status Act authorized Indian tribes to offer tax exempt bonds on a par with States and state government subdivisions but restricted the types of activities to be financed to essential public purpose functions.[13] That is, the law explicitly withheld authority to offer Industrial Development Bonds.

It is probably too early to evaluate the impact of this limitation and since the concept of tribal government revenue bonds is so new to the Indian economic development field, it is premature to assess the viability of this public financing mechanism. A conventional source of repayment by local governments for such bonds has been property tax levies or income generated by the activity to be financed given the limitations on a tribal tax base (i.e., trust property within a reservation is exempt from tribal taxes). Tribes will have to identify other forms of secure income in order to attract investors for tribal bonds. Notwithstanding such limitations, it would seem appropriate for the administration to explore the possibility of sponsoring an information program that would address for an Indian and non-Indian audience the practical and theoretical questions related to Tribal government revenue bonding potential.

The American Indian Development Finance Corporation proposal

A review of the literature on Indian Economic Development issues would not be complete without reference to the proposal to establish an American Indian Development Finance Corporation (AIDFC). The American Indian Development Corporation, a nonprofit Indian organization based in Albuquerque, New Mexico, has sponsored and coordinated an extensive 4-year research effort culminating in the AIDFC proposal. This research was initiated for the purpose of assessing a major recommendation of the American Indian Policy Review Commission. Namely, that a development bank type of institution can be established to address the need for development capital which was said to exist throughout Indian Country.

As noted earlier in this report, studies on Indian economic development problems, particularly those conducted by the GAO have uniformly questioned the ability of federal financial assistance agencies effectively to meet Indian business development needs.

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[13] U.S. Congress, House of Representatives, "Indian Tribal Governmental Tax Status Act of 1982," P.L. 97-473, Title II of *Tax Treatment of Periodic Payments*, pp. 4-8.

There would appear to be a consensus that government administered economic development assistance efforts suffer from inherent constraints and inefficiencies in relation to the private market mode of operation. There appears to be equal agreement regarding the converse of such a proposition. Namely, if Indian owned business enterprises are to succeed, they must be able to survive in the private economy. Thus, financial assistance and capital investment directed at Indian business enterprise development can only be effective if it relies on the principles underlying the operation of a private sector economy.

The study conducted by the American Indian Development Corporation entitled, *Initiatives in Development Finance: Creating an American Indian Development Corporation* is based on this fundamental assessment.[14]

Recently published as a two-volume series, this study documents the experience gained in the Indian economic development field and concludes that in the critical area of *access* to private development capital and commercial financing, the obstacles that exist in Indian Country can only be overcome on a meaningful scale if an institutional approach is taken. Their analysis relies in large measure on the lessons learned in development finance by the World Bank family of institutions but also analyzes the experience base of domestic development corporations and private, venture capital firms. The absence of a true private sector and financial structures on most reservations, the jurisdictional uncertainties confronting lenders and investors, unique land tenure and ownership issues, the lack of business management skills on the part of the local indigenous population and unique cultural considerations are circumstances which characterize both Indian country and the so-called less developed countries (LDC's) wherein a wealth of experience has been gained by the World Bank. Of course, the primary focus of the World Bank has been to provide financial and technical assistance designed to make it possible for the LDC's to access international financial markets and private investors.

The American Indian Development Finance Corporation is designed to approach the problem of access to capital and financing in a manner which is tailored to the unique conditions which exist in Indian country. The actual design of the institution, its proposed functions, operating principles and organizational structure are discussed in Volume I, Part 7 of the AIDC report. This paper was principally developed by Dr. Lorraine Ruffing, an economist with extensive experience in Indian economic development who is presently employed with the United Nations in Geneva, Switzerland. During the course of its research on the AIDFC proposal the AIDC consulted with a wide range of specialists in the development finance field as well as Indian business development practitioners and economists. In this process it was concluded that it was unlikely that such as institution could ever be established by relying exclusively on private investments due to the inability to offer a competitive rate of return on investment, at least over the short and intermediate term. Moreover, the ability to combine tax incentives and guarantees in its investment and borrowing functions has been deemed necessary for its operational viability and would only be possible if the institution were delegated such authorities by government action. Consequently, the AIDFC proposal calls for a federally chartered institution with the proviso that it be operated on private market principles.

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[14] American Indian Development Corporation, *Initiatives in Development Finance: Creating an American Indian Development Finance Corporation.* Vol. I. (Albuquerque, New Mexico: American Indian Development Corporation, 1982).

Finally, the rationale that an institutional approach is necessary to achieve significant progress in accessing private capital for Indian economic development is based on the proposition that an AIDFC type of institution could mobilize capital investment and capital structuring on a scale that would not otherwise be possible. If approached on a project by project or reservation by reservation basis, progress in this critical area will necessarily be quite limited. As noted earlier, Indian tribal organizations have a great need for capital and technical expertise in the areas of project appraisal and financial packaging. In addition, the non-Indian business community is often at a loss in determining how to approach a business relationship with Indian tribes. An institution possessing the needed capital, expertise and ability to communicate with the business community regarding Indian business development opportunities and relationships on a sophisticated level would perform both a necessary function and serve in a valuable role.

The AIDFC proposal is presently under serious consideration as a legislative initiative in a number of key congressional offices and there is some prospect that it will be introduced early on in the 98th Congress. The proposal was also strongly supported on a joint basis by the three major National Indian organizations in testimony before the U.S. Senate Select Committee on Indian Affairs during oversight hearings on Indian economic development, April 29, 1982.[15]

It is suggested that the administration closely review the background report on the AIDFC proposal prepared by the American Indian Development Corporation in the event that congressional action is initiated. In addition, this report contains extensive and substantial analysis of the issue of Indian access to private capital and financing which was prepared by highly qualified researchers which should prove to be of value to administration officials whose responsibilities relate to this critical area.

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[15] U.S. Congress, Senate Select Committee on Indian Affairs, *Oversight of Economic Development on Indian Reservations*, April 29, 1982, pp. 48–58.

APPENDIX

MAJOR FEDERAL ASSISTANCE PROGRAMS THAT IMPACT THE ECONOMIC DEVELOPMENT OF AMERICAN INDIANS

NOTE.—Much of the following information on the major U.S. departments that fund programs to aid the economic development of American Indians is derived from: U.S. Congress. Senate Select Committee on Indian Affairs, *Federal Programs of Assistance to American Indians,* by Richard S. Jones, Congressional Research Service. Washington, D.C.: Government Printing Office, June 1981.

Appropriations and other data have been updated according to the latest information available.

DEPARTMENT OF AGRICULTURE

Farmers Home Administration

Purposes: Various loan and technical assistance programs ranging from assisting Indian farmers and ranchers to become owner-operators of family farms; to make the best use of land and water resources; and to obtain decent, safe and sanitary dwellings and related facilities.

1982 fiscal year appropriation: $43.7 million (excepted level);[1] $12 million (Indian Land Acquisition Loan Program).[1]

1981 fiscal year appropriation: $42 million (general levels of assistance); $3.5 million (Indian Land Acquisition Loan Program).

DEPARTMENT OF COMMERCE

Economic Development Administration—Public works impact projects

Purpose: To provide immediate useful work to unemployed and underemployed persons in designated project areas.

1982 fiscal year appropriation: $8.6 million (6% to American Indians of $130 million total).

1981 fiscal year appropriation: $9.9 million (4% to American Indians of $259 million total).

Minority Business Development Agency

Purpose: To provide assistance to existing and potential minority businesses and business persons.

1983 fiscal year appropriation: $1.4 million (inter-agency agreements between MBDA, BIA, ANA).

DEPARTMENT OF ENERGY

Council of Energy Resource Tribes (CERT)—interagency contract

Purpose: To assist tribes with energy resources to develop their energy resources in ways consistent with their respective values and priorities.

1982 fiscal year appropriation: $1.5 million (funding from DOE, ANA, and BIA).

Energy production by Indian resource tribes in calendar year 1981.[2] 1981 fiscal year: Coal, 22,286,125 tons; Uranium, 2,442,873 tons; Oil, 22,944,904 barrels; Natural Gas, 119,482,985 mcf.

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[1] These figures represent an estimate of the total amount of financial assistance provided to Indians through a variety of FmHA programs. This information was provided by Mr. Stuart Jamieson, coordinator for Indian Activities, Inter-Governmental Affairs, Department of Agriculture.

[2] Estimates of energy production were provided by the Indian Affairs office at the Department of Energy.

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Administration for Native Americans

Purpose: To promote the goal of economic and social self-sufficiency for American Indians, Native Hawaiians, and Alaskan Natives.

1981 fiscal year appropriation: $28 million (continuing resolution to 3/15/83): $26.3 million, financial assistance grants; $700,000, training and technical assistance; $1 million, research, demonstration and evaluation.

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

Indian Housing Program

Purpose: To assist the local Indian governments to provide decent housing in their areas, where the needs have been exceptionally great.

1982 fiscal year appropriation: $18.55 million (3,016 units).

Community development block grants for Indian tribes and Alaskan Native villages

Purpose: To promote sound community development by improving the housing stock; providing community economic development of Indian communities.

1983 fiscal year appropriation: $30 million.

1982 fiscal year appropriation: $30 million (112 tribes).

Urban development action grants

Purpose: To assist distressed communities which require increased public assistance and private investment to alleviate physical and economic deterioration. Assistance will be made available for economic revitalization in communities with population out-migration or a stagnating or declining tax base, and for reclamation of neighborhoods, having excessive housing abandonment or deterioration.

1983 fiscal year appropriation: $100 million (25% of $400 million total to Indians and cities under 50,000).

1982 fiscal year appropriation: $1.1 million (Grant to YaWapai-Prescott tribe).

DEPARTMENT OF THE INTERIOR

Bureau of Indian Affairs

Indian timber (forestry) production

Purpose: To work with Indians to protect, develop, utilize and improve the Indian forests to yield the highest obtainable economic and social benefits for the Indian owners, with appropriate attention to the public interest.

1983 fiscal year appropriation: $25,537,000.

1981 fiscal year: $72,610,068 (total receipts from cash sales; contract and paid permits). Note: BIA holds approximately 10% for administrative fees.

Indian agricultural production

Purpose: To conserve and promote Indian use of Indian-owned lands to yield the highest economic return consistent with sustained yield land management principles and the fulfillment of the rights and aims of Indians.

1983 fiscal year appropriation: $22,651,000.

1981 fiscal year: 54.5 million (total acreage estimated in agriproduction); $727.4 million (estimate provided for gross sales of all products).

Indian minerals production

Purpose: To gather mineral resource data with which to help Indian landowners and the Department of the Interior to make more prudent decisions regarding Indian mineral resource development.

1983 fiscal year appropriation: $8,266,000.

1981 fiscal year: $269 million (receipts from total mineral production). NOTE: See Energy Production under "Department of Energy."

BIA employment assistance

Purpose: To provide adult vocational training and job placement assistance to Indian and Alaska Natives in order to promote economic self-sufficiency for tribal and Alaska Native people and their governments.

1983 fiscal year appropriation: $27,514,000.

1982 fiscal year appropriation: $27,120,000.

BIA business enterprise development

Purpose: Provides conditional grants to Indian tribes for initiating business development of natural resources, encouraging non-federal investments, and promoting sound business principles.

1983 fiscal year appropriation: $11,046,000 (includes $5 million for Economic Development Initiative).

1982 fiscal year appropriation: $8,389,000.

DEPARTMENT OF LABOR

Native American Employment and Training Program (CETA)

Purpose: Provides employment, training and related services to Native Americans who are unemployed, underemployed or economically disadvantaged.

1983 fiscal year appropriation: $90 million total (continuing resolution to 3/15/83): $68.9 million, Title 3 (classroom training, work experience); $3.8 million, Title 4 (year-round youth); $12.7 million, Title 4A (summer youth); $4.6 million, Title 7 (private industry initiatives).

DEPARTMENT OF TRANSPORTATION

Indian Highway Safety Program

Purpose: To assist Indian tribes in financing highway safety projects. These projects are designed to reduce the number of traffic accidents and the resulting fatalities, injuries and property damage within reservations.

1983 fiscal year appropriation: $450,000 (estimate).

1982 fiscal year appropriation: $439,375.

Formula grant assistance to non-urbanized areas.

Purpose: Provides for capital costs and operating costs exclusively for non-urbanized areas under 50,000.

1983 fiscal year appropriation: $30,250.

1982 fiscal year appropriation: $699,137.

1981 fiscal year appropriation: $1,275,889.

NOTE: Total funding for this program from '79 FY to '83 FY totals $2,050,130.

SMALL BUSINESS ADMINISTRATION

Economic opportunity loans for small businesses

Purpose: To provide loans up to $100,000, with a maximum maturity of 15 years to small businesses owned by low income or socially or economically disadvantaged persons.

1982 fiscal year appropriation: $129.8 million (3,099 Indian businesses).

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THE AMERICAN INDIAN DEVELOPMENT FINANCE CORPORATION IN THE CONTEXT OF FEDERAL INDIAN LAW

By Eric D. Eberhard

INTRODUCTION

This paper presents a general discussion of the special federal/Tribal relationship; the barriers encountered in Indian economic development; and the compatibility of the American Indian Development Finance Corporation (AIDFC) with federal Indian law.

THE FEDERAL/TRIBAL RELATIONSHIP

The Indian Tribes have long been regarded as having a unique and special relationship with the federal government.

The United States Constitution provides that the Congress shall have the power to regulate commerce "with the Indian Tribes". Art. I, Sec. 8, Cl. 3. From the very beginning of the federal government, the Congress has recognized the special relationship with the Tribes. Thus, the first Congress in 1789 enacted the Northwest Ordinance which declared:

> The utmost good faith shall always be observed toward the Indians; their lands and property shall never be taken from them without their consent; and in their property, rights and liberty they shall never be invaded or disturbed, unless in just and lawful wars authorized by Congress; but laws founded in justice and humanity shall, from time to time, be made, for preventing wrongs being done to them, and for preserving peace and friendship with them. 1 Stat. 50, 52; Article III of the Northwest Ordinance.

In 1790 Congress enacted the Non-Intercourse Act, 1 Stat. 137, 25 U.S.C. § 177 which protected Indian lands from divestment except through federally negotiated treaties. This Act has been judicially determined to establish a fiduciary obligation on the part of the United States to protect Indian lands. See, *Joint Tribal Council of the Passamaquoddy Tribe* v. *Morton,* 528 F. 2d 370 (1st Cir. 1975) and *United States* v. *Southern Pacific Transportation Co.,* 543 F. 2d 676 (9th Cir. 1976).

Over the years, detailed articulation of the federal/Tribal relationship has come from both the Congress and the federal courts. In *Cherokee Nation* v. *Georgia,* 30 U.S. (5 Pet.) 1 (1831) the Supreme Court determined that the Tribes are "domestic dependent nations" and that their relationship "to the United States resembles that of a ward to his guardian." *Id.* at 17. In *Worchester* v. *Georgia,* 31 U.S. (6 Pet.) 515 (1832) the Supreme Court reaffirmed the status of the Tribes as self-governing entities and further held that the laws of the State of Georgia had no applicability on the Cherokee reservation.

The fundamental legal principles enunciated in *Cherokee Nation* and *Worchester* continue to form the legal foundation of the federal/Tribal relationship. Tribes retain those sovereign powers which the Congress has not limited or otherwise taken away. *Merrion* v. *Jicarilla Apache Tribe,* 9 Ind. L. Rept. 1001 (U.S. Sup. Ct. 1982). An attribute of Tribal sovereignty is immunity from suit. *Santa Clara Pueblo* v. *Martinez,* 436 U.S. 49, 58 (1978). Tribes have full authority to govern themselves, subject to such restrictions and exceptions as the Congress may impose. *Id.* Most state laws are not applicable to reservation Indians while they are on the reservation. *Williams* v. *Lee,* 358 U.S. 217 (1959). Congress has enacted laws providing for enforcement of state law on reservations where the Tribe consents to state jurisdiction. 25 U.S.C. §§ 1321 and 1322.

The Congress has also enacted a wide range of laws intended to protect Indians and their property while at the same time promoting economic self-sufficiency. Thus, most Indian lands and resources are held in trust by the United States for the benefit of Indian Tribes and individuals. Contracts, liens or other encumbrances on Tribal or individual trust property are void without proper federal approval. See, for example, 25 U.S.C. §§ 81, 177 and 391–415d. Commerce and trade between Indians and non-Indians is regulated by federal law. See 25 U.S.C. §§ 261–264. The courts have required the Department of Interior to promulgate regulations to govern the conduct of trade between Indians and non-Indians on federally established reservations. *Rockbridge* v. *Lincoln,* 449 F. 2d 567 (9th Cir. 1971).

In *Alaska Pacific Fisheries* v. *United States,* 248 U.S. 78 (1918) the Supreme Court held that among the purposes for the creation of Indian reservations by the Congress are the need to safeguard, make self-sustaining and advance the dependent Indian nations. This same principle found its most recent expression in the case of *Merrion* v. *Jicarilla Apache Tribe, supra.* In upholding the inherent sovereign power of the Jicarilla Tribe to impose a severance tax on non-Indians involved in the extraction of oil and gas from the reservation, the Court found that the Tribal tax would promote the self-sufficiency of the Tribe. Id. at 1003–1004.

The federal government exercises wide authority over Tribal and individual Indian funds derived from the use or sale of trust property. See 25 U.S.C. §§123, 155, 157, 158, 160, 161, 161a, 162a. The federal courts have held that the United States has a fiduciary duty to manage Indian funds in a manner which will yield maximum returns. *Cheyenne-Arapahoe Tribes of Indians of Oklahoma* v. *United States,* 512 F. 2d 1390 (1975) and *Manchester Band of Pomo Indians, Inc.* v. *United States,* 363 F. Supp. 1238 (Cal. 1973).

Pursuant to Acts of Congress, the Department of the Interior has promulgated regulations governing the use and management of Indian lands and resources. Regulated activities include mining, forestry, irrigation, oil and gas development and rights-of-way for all purposes. 25 C.F.R. Subchapter K. The Interior Department also regulates the use and investment of Tribal and individual Indian funds. 25 C.F.R. Subchapters I and J.

In order to promote economic self-sufficiency among Tribes and individual Indians, the Congress has established and the Secretary of Interior administers a revolving loan fund. 25 U.S.C. § 482; 25 C.F.R. Parts 91-93. During 1974 the Congress enacted P.L. 93-262, the Indian Financing Act. 25 U.S.C. §§1451 et seq. This Act was intended to promote Indian economic development through the provision of loans, loan guarantees, interest subsidies and insurance.

From the foregoing overview of the federal/Tribal relationship, we can conclude that the federal government exercises direct fiduciary authority over Indian lands, resources, finances and economic matters. Tribes are sovereign entities which are generally free from state regulation and jurisdiction. As sovereigns, Tribes enjoy immunity from suit and posssess the necessary legal authority to be self-governing. Congress may regulate the extent and exercise of Tribal sovereignty.

BARRIERS TO INDIAN ECONOMIC DEVELOPMENT

AIDC has thoroughly documented numerous barriers to Indian economic development. In part, needed capital does not flow to Indians because of the condition of reservation economies. Most reservations are remote from market centers and are comprised of marginal lands. Indian entrepreneurial and management skills are generally now well developed. Virtually all reservations lack necessary infrastructure and internal capital. These economic factors have accounted for the failure of many economic development projects in Indian country.[1] Federal efforts to promote Indian economic development, such as the Indian Finance Act, have generally met with failure due to inadequate project review and monitoring, administrative deficiencies, inadequate technical assistance and insufficient funding.[2]

The special federal/Tribal relationship has also resulted in the creation of certain legal barriers to Indian economic development. The trust status of Indian lands and resources generally means that they cannot be pledged as collateral. This fact, coupled with Tribal sovereign immunity and the lack of state jurisidiction on most reservations, has reportedly led most private or commercial creditors to avoid investments in Indian economies.[3] These legal barriers are perceived to create additional risk and uncertainty for private and commercial investors.

Notwithstanding the perceptions of investors, it should be noted that all of the legal barriers to Indian economic development can be surmounted through careful and knowledgeable preparation of investment and financial agreements. For example, leasehold mortgage interests or certificates of deposit may be used in place of land and resources as collateral for loans. Questions involving the applicability of state laws to reservation based activities can be anticipated and resolved during negotiations in order to reduce the creditor's perceived risk and uncertainty. It is also possible and advisable to anticipate and resolve problems which may arise from Tribal sovereign immunity.[4]

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[1] See, Natwig, E. *Initiatives in Development Finance: Institutional Barriers to Financing Development Projects in Indian Country* (AIDC 1981).

[2] *Id.*, General Accounting Office, "More Federal Efforts Needed to Improve Indians' Standard of Living Through Business Development", Report to Congress, February 1978.

[3] Collins, R., *Debt Enforcement In Indian Country* (AIDC 1982); ————, *Legal Problems of Financing on or Near an Indian Reservation and Possible Solutions* (American Indian National Bank 1980) and Little, J., *Development Financing Alternatives on Tribal Lands; The Lenders Perspective*, (University of Arizona 1981).

Compatability of AIDFC With Federal Indian Law

A. PURPOSE, ORGANIZATION AND POWERS OF AIDFC [5]

As proposed, the AIDFC would seek to address the known barriers to Indian economic development by mobilizing both the necessary capital and technical assistance. Although AIDFC would only make its services available to profit making ventures, a key eligibility requirement would be a determination by AIDFC that a particular venture will contribute to the economy of a Tribe or Tribes. Thus, borrowers would have to demonstrate the capacity to repay financing, generate income and jobs, develop Indian resources and provide needed goods and services to Indian communities.

AIDFC would have the capacity to provide and coordinate the use of long-term capital, working capital, technical assistance and training for Indian businesses. Further, the AIDFC would be an independent institution in which loan and assistance decisions are based on objective project selection criteria. It would have the financial support of the federal government, Indian tribes and the private business and financial community. In order to provide for the full participation of all of these parties and to provide AIDFC with the necessary capacity, the AIDFC would be a mixed ownership federally chartered corporation. The AIDFC would also be exempt from federal and state taxes to enable it to reinvest all net income not paid in dividends.

The equity capital for AIDFC would come from the sale of common stock to the federal government, Indian tribes and private sector businesses. In addition, the federal government would extend a long term, low interest loan to the AIDFC. Other AIDFC capital would be derived from portfolio sales and earnings. Finally, the AIDFC would raise capital through the sale of debt instruments such as bonds and notes. In order to enhance the marketability of AIDFC debt instruments, bondholder's interest earnings would be exempt from taxation; federally chartered commercial banks would be authorized to purchase the debt instruments; the federal government would guarantee AIDFC debt and the debt instruments would be suitable for use by commercial banks in satisfying federal reserve requirements. The AIDFC charter would establish a ceiling on the allowable debt/equity ratio.

AIDFC would be governed by an eleven member Board of Directors elected by the stockholders. Sales and purchases of AIDFC stock would be regulated to ensure representation of Indian, federal and private sector stockholders. Indian control of AIDFC would be assured through majority representation on the Board of Directors.

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[4] Collins, R., *Debt Enforcement In Indian Country* (AIDC 1982).

[5] The following description of AIDFC is derived from my review of Ruffing, L., *Initiatives in Development Finance,* (AIDC 1981).

The AIDFC would provide a wide range of financial services to promote Indian business development, financial structuring and capital formation. Long term venture capital would be provided in the form of equity, with AIDFC retaining the option to sit on the Board of Directors of the enterprise to ensure proper management. The AIDFC would establish upper limits on the size of its equity position in any one enterprise; the share of AIDFC's equity and loans in a project's total cost; and on the proportion of AIDFC total funds invested or loaned to any one enterprise. Further, the AIDFC would diversify its investments among different types of projects such as natural resources, agriculture, light manufacturing and commerce. Among the eligible borrowers would be tribal governments, tribal community development corporations, tribal enterprises, Indian cooperatives, partnerships, corporations and individuals.

To complement its direct loan and equity investments, the AIDFC would be able to provide loan guarantees and to engage in cofinancing with existing financial institutions. The AIDFC would also be able to assist its borrowers with brokering and underwriting services. In other words, the AIDFC would serve as the financier, investor, lender, packager, guarantor, underwriter and broker for Indian enterprises.

B. AIDFC AND FEDERAL INDIAN LAW

Based upon the foregoing description of AIDFC's purpose, organization, and powers, I believe that it would be entirely compatible with the special federal/Tribal relationship. Moreover, I do not believe that it would in any way alter the basic doctrines of federal Indian law. Nothing contained in the AIDFC proposal would operate to diminish Tribal sovereignty or the trust status of Indian lands, resources and funds. Tribal powers of self-government would not be diminished. The doctrine of Tribal sovereign immunity would also be unaffected. In fact, if AIDFC can successfully accomplish its purposes, then it appears that the Tribes could reasonably expect that their sovereignty and powers of self-government would be enhanced over the long term.

In the context of prior Acts of Congress which were intended to regulate and promote Indian economic development, AIDFC appears to be a logical extension. Through its ability to provide loan guarantees and cofinancing, AIDFC should be able to attract private capital for investment in Indian economies. With its reliance on objective project selection criteria and its status as an independent federal corporation, AIDFC provides a suitable vehicle for the effective and secure investment of both public and private capital. This is also evident from the ability of AIDFC to provide a flexible array of financial services combined with necessary technical assistance. Thus, the AIDFC addresses the institutional barriers to Indian economic development which have plagued earlier efforts, such as the Indian Finance Act and the Revolving Loan Fund. As proposed, AIDFC would be a significant step toward attainment of Congress' long standing goal of fostering self-sufficient Indian economies.

Because AIDFC will deal exclusively with Indian borrowers, it will have the expertise and capacity to address the legal barriers to Indian economic development on a case by case basis. In addition, AIDFC would be in a position to assist Tribes in marshalling other resources for the development of laws and legal systems designed to promote and enhance development of self-sufficient reservation economies.

For the Tribes and Indian individuals, AIDFC should provide desperately needed access to investment capital. It is not without some risk. Tribes and Indian individuals are required to become stockholders before they are eligible for AIDFC's services. In addition, borrowers would be expected to post collateral. AIDFC would, however, be in a position to allow flexibility both as to the required types and amounts of collateral. Questions of sovereign immunity would necessarily be handled on a case by case basis, as would jurisdictional and state law issues. This would be accomplished within the context of existing federal Indian law through proper preparation of financial agreements. In other words, AIDFC would provide access to new capital without any diminishment of the special federal/Tribal relationship.

It should also be noted that AIDFC appears to be compatible with those state laws with which I am familiar. To the extent that AIDFC may do business in any particular state, there will be a need to comply with "Blue Sky" laws and other laws regulating business activities. I see no reason why this cannot be accomplished by the AIDFC. Moreover, AIDFC's compliance with applicable state laws should not in any way interfere with or diminish the special federal/Tribal relationship.

CONCLUSION

As proposed, the AIDFC is well suited to promote the development of Indian economies. It will provide a secure method for private and commercial capital to be invested in Indian owned businesses. Through careful project selection and the provision of adequate capital and technical assistance, AIDFC will be able to enhance the opportunities for successful development and growth of Indian businesses and economies.

I believe that the proposed AIDFC would further the special relationship between Tribes and the federal government. It would advance the Congressionally and judicially declared goal of promoting Indian economic self-sufficiency. As proposed, it would neither diminish the sovereign immunity of Tribes and their powers of self-government, nor would it result in any diminishment of the trust status of Indian lands and resources.

INSTITUTIONAL BARRIERS TO FINANCING DEVELOPMENT PROJECTS IN INDIAN COUNTRY

By Eric Natwig

INTRODUCTION

The extent of underdevelopment of American Indian reservations has been extensively documented in a number of studies prepared for the Congress over the past decade.[1] American Indians living on Indian reservations have endured the highest unemployment rates and the lowest family income levels to be found anywhere in the United States: According to the Bureau of Indian Affairs, the average rate of unemployment on reservations with a population of 100 or more is 36.8 percent. According to the 1970 Census sample of 115 Indian reservations,[2] 53.3 percent of the Indian families living on these reservations had incomes below the poverty level. A recent survey of selected reservations conducted on behalf of the American Indian Development Corporation in 1980 [3] indicated a lack of significant improvement in the material conditions of reservation Indians from the conditions which existed a decade ago.

Out of the several efforts to understand and alleviate American Indian poverty has come a general agreement that the development of reservation-based economic enterprises, especially those linked to reservation resources, is the basis for providing reservation Indians with increased employment opportunities, and dependable sources of income. Although the reservations with resources is quite limited, there seems to have emerged a concensus in Indian country that increased demand for, and increased prices of, reservation resources, now make it possible to establish a number of enterprises, which were previously not economically feasible. Furthermore, some tribes have gained over the past decade increased internal capabilities in project identification, planning and analysis.

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[1] A number of recent reports have dealt with problems encountered in promoting enterprise development and difficulty in obtaining capital on Indian reservations. The Joint Economic Committee (1969) published a compendium of papers dealing with development prospects and problems, development programs and plans, and the Indian resource base. The General Accounting Office (1975) prepared a report which discussed the effectiveness of federal efforts to improve economic conditions on Indian reservations, the problems encountered, and the opportunities to improve these efforts. A second report by GAO (1978) determined that more federal efforts were needed to improve Indians' standard of living through business development. The American Indian Policy Review Commission (1976) sponsored a report by its Task Force on Reservation and Resource Protection and Development which explored issues arising out of increased tribal involvement in the development of their reservations in light of federal government policies and programs.

[2] Data from the 1980 Census are not yet available, even in preliminary form, below total counts, according to the Census Bureau.

[3] John R. Brown, "Preliminary Report on the Economic Development Needs Assessment Survey," prepared for the American Indian Development Corporation, 1980.

As market conditions for reservation resources have improved and internal capabilities have increased, the inability of tribes to assemble adequate capital to finance their development projects has become more acute. The reasons for this have to do with the unique economic and institutional environment of Indian country and the inadequacy and constraints of capital provided by traditional commercial sources and federal categorical grant programs.[4] And, in light of the recent budget cuts proposed by the Reagan Administration, it seems likely that access to the principal sources of equity and debt capital will be severely curtailed.

It is the purpose of this paper to document the above assertions from the existing literature on Indian economic development. In order to provide guidance to efforts to design a new institutional approach to financing American Indian enterprises, it is necessary to understand why existing institutions are either inadequate or inappropriate to provide the amounts and kinds of financing and technical assistance required so that enterprises may succeed in the reservation environment.

The next section describes the economic context of reservation development, and the third section the institutional context. The sections provide reasons Indians find it difficult to finance their development. The fourth section identifies and discusses barriers to capital acquisition from traditional private sources. The fifth section presents findings of government reports on the record of federal assistance to Indians. The sixth section provides concluding remarks and presents findings of the economic development task force of the American Indian Policy Review Commission on the need for an Indian development finance institution.

THE RESERVATION ECONOMIC CONTEXT

Generally, Indian reservations are located on lands which possess marginal resource bases remote from major markets. Indian management skills are underdeveloped; entrepreneurship of any significance is only recently emerging. Physical infrastructure is underdeveloped or non-existent. Capital accumulation has been very limited and capital is unevenly distributed among tribes.

Marginal, remote land base

History tells of the past takings of Indian lands by white settlers and the federal government. Indians, time and again, were forced off those lands that offered economic potential onto isolated reservations far removed from emerging population centers. This is brought up not to excoriate the federal government for past sins: but rather to indicate why the task of establishing truly profitable businesses on reservations is so difficult. As reported by the American Indian Policy Review Commission, "the problem of reservation development stems from the fact that the lands remaining in Indian hands are in large part sub-marginal in terms of their resource base, and are therefore, unable to support the ever increasing Indian population. In addition, the relocation of Indians to isolated reservations has resulted in their being far removed from the major regional economic centers of the United States and thus placed at a locational disadvantage in terms of industrial development."[5]

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[4] American Indian Policy Review Commission, Task Force Seven, "Final Report to the American Indian Policy Review Commission", 1976, page 119. This report is hereinafter referred to as AIPRC.

However, notwithstanding the fact that many reservations are resource poor and isolated, some reservations have benefited from the increased demand for their raw materials as they have decreased in supply and increased in price nationwide. Some reservations are exporters of raw materials and importers of manufactured goods. But, on those reservations where there are significant resource extraction activities, there is no significant vertical integration from these primary activities. And, retail trade and services are typically underdeveloped leading to significant leakage of dollars off reservations.

Undeveloped management and entrepreneurial skills

The management skills and entrepreneurial talent necessary to fully capitalize on what resource opportunities there are, in short supply. The Policy Review Commission noted that "the full scope of manpower skills which will be required to manage fully Indian controlled reservations include large numbers of highly skilled professionals, technicians and managers,"[6] such skilled professionals do not now exist in sufficient numbers. Managers can be trained, but management skills are acquired through experience. Most reservations currently possess few opportunities for apprenticeship positions where these skills can be obtained, and if a tribal member goes off the reservation to acquire management experience, his/her skills are lost to the tribe.[7]

Lack of physical infrastructure

Indian reservations have underdeveloped physical infrastructure. On Indian lands, there are fewer roads per square mile, fewer houses with plumbing, electricity or telephones than on the lands immediately adjacent to reservations. As a result, most economic activity involving reservations residents takes place in "bordertowns" which have improved facilities, making it extremely difficult for tribes to provide commercial goods and services for their own internal markets.

Inadequate internal capital

The principal sources of tribal funds for development are accumulated trust funds and annual revenues from tribal resources.

Trust funds originate from claims awards, sales or lease of tribal land, minerals, timber, water and interest from investments and funds in the U.S. Treasury.[8] As a result of widely differing resource endowments, trust funds are not evenly distributed; in fact, few tribes have sufficient trust funds to capitalize their development projects, even if they had control over the funds to do so. The control of tribal trust funds rests with the Bureau of Indian Affairs, which historically has been extremely conservative with the management and investment of tribal funds. Presently, the Branch of Investments of the Bureau of Indian Affairs "can invest tribal trust money only in financial investments which are fully guaranteed."[9] This constraint, imposed administratively, has interfered with the placement of funds. According to the American Indian Policy Review Commission, this has hindered tribes from establishing banking relationships with local banks as "small banks are not always able to accept tribal trust money because (small local banks do) not have the resources to accept it. Therefore, the bulk of trust funds are deposited in large financial centers"[10] in banks which are not intimately familiar with reservation conditions.

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[5] *Ibid.*, page 130.
[6] *Ibid.*, page 110.
[7] *Ibid.*, page 111.
[8] *Ibid.*, page 74.

Because the revenue base of tribal governments is so precarious, tribal officials are naturally reluctant to risk the meager resources they have. When interviewed on this subject, "most tribal chairmen said that they lacked the expertise (to invest their funds) and that their people wanted their money 100% guaranteed."[11] It should be kept in mind that constraints on investment apply only to tribes with funds; few tribes have sufficient trust funds to be a significant factor in their own development.

The other source of tribal funds is rents and royalties from resource development which is accumulated on an annual basis. These revenues are limited as they are, for the most part, derived from leases which have been executed before tribes realized the true value of their resources and were able to negotiate terms which reflect market values. Because of the extreme immediate needs of their people, the great majority of tribal resource revenues have gone to governmental and social services, and therefore few tribes have sufficient capital from revenues to invest in their own development.

Similarly, Indian individuals for the most part do not have sufficient equity to capitalize small businesses. The financial demands of large extended families make it extremely difficult for individuals to accumulate savings. Furthermore, land lease provisions which require that fixed capital revert to the land at expiration of the lease do not allow individuals to build up transferable equity investing in fixed capital.

THE INSTITUTIONAL ENVIRONMENT

In addition to the economic disparities between Indian and non-Indian communities, there are certain aspects of the legal and administrative structures on reservations that are significantly different from the legal and administrative structures of most communities in the United States. These are largely an outgrowth of the protective devices that have been placed around Indians by the federal government, and the institutional adaptations to these devices. These differences have to do with the ownership and use of land and resources in Indian reservations and in the functions and powers of tribal governments and the federal government.

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[9] *Ibid.*, page 75.
[10] *Ibid.*
[11] *Ibid.*, page 76.

Land status

The United States holds 48 million acres in trust for tribes and 11 million acres of land in trust for individual allottees. The trust status of land was established by treaties and subsequent Acts of Congress and Presidential Executive Orders. The trust status of lands means that the land cannot be sold, but in practice, tribal governments may grant use rights in the form of long-term leases subject to the approval of the federal government. Ordinarily, the Bureau of Indian Affairs is authorized to approve leases, but on occasion the Secretary of the Interior has retained the power of approval for himself. For purposes of economic development, the complexity of Indian land ownership and control always creates uncertainty and substantial delay and adds to the cost of doing business in Indian country.

Tribal sovereign immunity

Federal law holds that Indian tribes are sovereign but dependent nations. As such, federally recognized Indian tribes are generally immune from suit. It has been Congressional policy "not to sanction suits upon contracts or other causes of action at the instance of private parties. In respect to their liability to be sued by individuals . . . they have been placed by the United States, substantially on the plane occupied by the States under the eleventh amendment to the Constitution." [12]

Tribes can, however, waive their immunity from suit. Provisions in the Indian Reorganization Act permit tribes to adopt a constitution and by-laws and to create a separate business corporation to vest all or part of a tribe's assets. A tribe can adopt a "sue and be sued provision" in its corporate charter, but the exercise of such must be limited only to the collateral assigned. However, certain tribes have not organized to the extent that they have corporate charters. In these cases, tribes can stand on sovereign immunity and are immune from suit.[13]

Jurisdiction [14]

As sovereign but dependent nations, reservation Indians have the right to make their own laws and be governed by those laws. Some tribes have established judicial systems; their courts hold sway over civil matters. While there are provisions in the U.S. Code which give certain states civil jurisdiction over Indians, in much Indian case law, state laws have no applicability on reservations. In a case argued before the Supreme Court in 1959, the Court held that State courts lacked jurisdiction to hear a case involving a non-Indian trader who was attempting to collect from two reservation debtors. The court ruled that a debt collection suit could only properly be brought in tribal court.

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[12] *Thebo* v. *Choctaw Tribe of Indians*, 66 F. 372 (8th Cir. 1895) cited in American Indian National Bank, "Legal Problems of Financing on or Near an Indian Reservation and Possible Solutions," hereinafter referred to as AINB. Paper prepared for the American Indian Development Corporation, October 1980.

[13] AINB, page 4.

[14] Eric Eberhard, "Legal Problems Affecting or Restricting Economic Development Activities in Indian Country." Paper prepared for the American Indian Development Corporation, April 1978, pages 9-11. This paper provides a review of major Indian case law on the subject.

Taxation and public debt

In exercise of their sovereign powers, some tribes have established tax codes. These codes are generally patterned after similar state or federal taxes. But the establishment of tribal tax codes is not the same as collecting the taxes. Several tax cases are now being litigated where corporations, principally energy companies, contend that, because they cannot participate in tribal government affairs, they are subject to taxation without representation. The issues surrounding Indian taxation are highly complex and no Indian government has been able to finance itself through taxation.

Tribes have attempted to raise capital by means of public debt instruments. While tribes have the authority to issue public debt instruments (revenue, general obligation or industrial bonds), under current law any such bond issues would not be tax-exempt. While there are currently efforts underway to secure tax-exempt status for Indian tribal bonds, their marketability is in question because tribes are an unknown entity in the bond marketplace. Furthermore, tribes have not established taxation programs of sufficient scope to generate the revenues to repay the bonds.

Tribal governments as promoters of economic development

The financial basis of many tribal governments apart from federal programs have typically been royalties from resource leases. Except in rare cases, these revenues have not been sufficient to cover operating expenses. Tribal governments provide a wide range of services to their people without an adequate tax base. Furthermore, the levy of state taxes on what few firms there are, place tight limits on tribes' abilities to establish a revenue base from taxation. Tribes then, unable to fund themselves sufficiently through royalties and taxation, are being forced to fund themselves through profits.

Tribes typically have had very limited control over the manner in which their resources have been utilized, in part because of the way in which past treaties and leases have been negotiated and the manner in which the Bureau of Indian Affairs has administered the trust responsibility. Tribes must establish control over their resources if they are to prevent the further exploitation of their resources with only limited return to tribes that has occurred in the past. Tribes must establish ownership control so that development decisions are consistent with tribal goals.

For the most part there is only a very limited private sector on reservations. Indian individuals typically have neither the capital nor the expertise to build a reservation economy by themelves. Tribal governments must rush into the breach for only tribes are able to organize the resources for a development program of the scale necessary to significantly improve reservation conditions. This does not mean, however, that tribes should preempt entrepreneurial members who are capable of establishing smaller enterprises on their own. The successful implementation of a development program must be led by the tribe, built around the uncommitted resources still in its control, in partnership with individuals to fashion a viable diversified tribal economy. As Indian tribes and

Indian individuals have reached this stage in their economic development, they are finding the accessing of funds with which to finance their development projects more difficult. The next section discusses the source of development capital and the difficulties encountered in apply these to reservation-based projects.

BARRIERS TO CAPITAL ACQUISITION

Private lenders are reluctant to lend to reservation-based ventures. Most commercial bankers do not consider reservations to be viable lending markets; one banker commented that his bank loans primarily out of a sense of corporate social responsibility in order to promote community goodwill.[15]

Collateral

Lenders require collateral for their loans. The lack of authority for tribes, or individuals, to use their land, their main asset, as security, requires that they must pledge other assets. Primary sources of collateral that lenders have indicated they will accept are certificates of deposit, or the interest on certificates of deposit assigned to the bank or assignment of lease rental income collected by a third party. However, even if such sources of collateral were pledged, off-reservation lenders perceive reservation based loans as risky for a number of reasons. Two legal problems banks face in lending, as noted by the American Indian National Bank,[16] center around tribal sovereign immunity and/or jurisdictional disputes. Banks fear that in event of a loan default, their recourse may be limited. If a tribe has not organized to the extent that it has a corporate charter, it cannot "sue or be sued" and a bank therefore could not recover a potential loss through legal action in any court. Furthermore, off-reservation lenders who are not tribal members, are reluctant to press their claims in tribal courts as they feel they would be at a disadvantage in tribal proceedings.

Servicing costs

Among other problems noted by lenders is the expense of servicing loans to reservation Indians. These costs include those relating to the distance of reservations from lending institutions and the additional time required to properly monitor loans where management problems may be perceived to be at issue.

Perceived high risk

For the reasons noted above, loans to reservation Indians are generally considered to be high risk loans. In order to minimize risk, banks have required 100% federal loan guarantees. Because the banks' exposure has been reduced to only the administrative time taken to process loans, it has been reported that the banks had no incentive to properly monitor these loans, and this contributed to project failures. An official at the Bank of America stated that in light of the substantial reduction in federal loan guarantees, it was likely that for his bank, that loans to Indian ventures, among other minority loans, would be curtailed.[17]

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[15] Personal communication with Paul Klores, Vice President, Valley National Bank, Phoenix, Arizona, April 15, 1981.

[16] AINB, pages 4–8.

It has been pointed out that commercial banks are not appropriate to finance development projects, which require long-term financing because banks, in order to maintain liquidity, primarily loan for the short term. "Banks provide the worst form of financing for a small growing firm. They provide only debt, the amortization of which reduces the ability of a small firm to reinvest profits and grow. Furthermore, commercial banks generally do not provide long-term loans. Shorter-term financing sharply increases the debt service demands on a firm precisely at the time when their demands for capital is the greatest, further constraining the growth of small firms." [18]

Venture capitalists, who provide longer-term investment capital, specialize in high risk ventures and it would appear that this is a much better suited form of financing for reservation ventures. However, venture capitalists favor high technology, high return ventures with extremely fast growth potential with sound management. Reservation enterprises are generally conventional in nature and are thus less attractive. Management is perceived to be lacking. Also the remoteness of reservations place reservation ventures at a disadvantage in attracting venture capital, as venture capitalists generally concentrate on firms located close to their offices so that they can maintain a close advisory relationship with the enterprises they finance.[19]

Lack of Information

The sale of securities has been suggested as the best, but least accessible source of financing for businesses in rural areas.[20] A recent study noted, "The inadequacy of current data possessed by tribes about their reservation economies," [21] and lack of detailed project analysis. The sales of securities require much information about reservation economic environment and investment opportunities, but typically, investors feel that the reservation environment is too risky, partially because of this lack of information.

THE RECORD OF FEDERAL ASSISTANCE

Lacking sufficient internal capital and effectively cut off from conventional sources of private financing, Indians have found themselves almost totally dependent upon the federal government as their primary source of capital for development. Since the 1950's, the federal government has provided capital in the form of categorical grants, subsidized loans, loan guarantees and interest subsidies. The record of the federal programs providing assistance to reservations has been mixed, and the impact of federal assistance has been diminished according to several major Congressional studies [22] conducted over the past decade, because a number of deficiencies in the administration of these programs, including inadequate project review and monitoring and inadequate technical assistance, and because of the inadequate level of funding. The economic program of the Reagan Administration proposed to severely cut back, and in certain cases abolish, the funding for programs which have provided the major assistance for reservation economic development. In light of this, it would not make sense to present a program-by-program review, for some of the problems noted and recommendations proposed, would now be moot. However, the major points are assembled below.

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[17] Personal communication with Cecil Byrd, Vice President, Bank of America, Los Angeles, California, April 13, 1981.

[18] Nancy Barbe, "Financing Rural Business: An Analysis of Sources of Long-Term Capital." Paper prepared for the National Rural Center March 1980, page 9.

[19] *Ibid.*, pages 4–6.

[20] *Ibid.*, pages 6–7.

[21] Brown, page 1.

[22] These studies were previously cited in note 1, above.

Inadequate project review and monitoring

The major programs that have provided assistance to enterprise development on Indian reservations are the Economic Development Administration, the Small Business Administration and the Bureau of Indian Affairs. The General Accounting Office, noting that by the nature of the programs, business ventures funded by SBA and EDA generally involve greater risks than do typical new business ventures financed through conventional sources, took these agencies to task for inadequate review and monitoring of Indian business ventures.

"In our opinion," GAO stated, "EDA and SBA have not adequately evaluated the feasibility of proposed business ventures on reservations before providing financing assistance. In some cases these agencies did not require the development of all necessary information to permit a good evaluation of the business ventures' propects. In other cases the agencies provided financing without requiring the resolution of known problems."

"Once financing has been provided, EDA and SBA did not monitor the business ventures' operations to promptly identify deficiencies in these operations and to provide the assistance needed to correct them before they became so severe that they caused operations to be discontinued."[23]

Administrative deficiencies

The Bureau of Indian Affairs assumed a greater role in reservation economic development with the passage of the Indian Finance Act in 1974. The Act was passed to increase the availability of funds to individual Indians and Indian tribes for starting or expanding business enterprises on or near reservations. The GAO, in 1977, found several program management deficiencies which hindered the success of the Act. According to the GAO, the Bureau, contrary to stated policy, made direct loans to relending organizations with continuous high delinquency rates. Furthermore, the GAO fund that loans were made without a reasonable prospect of repayment. Cited was an example of a loan extended to an Alaskan corporation which owed the Federal Government more than $6 million.[24]

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[23] General Accounting Offices, "Improving Federal Assisted Business Development on Indian Reservation." Report to the Congress, June 1975, page 75.

[24] General Accounting Office, "More Federal Efforts Needed to Improve Indians' Standard of Living Through Business Development." Report to the Congress, February 1978, pages 31-33. This report is hereinafter referred to as GAO (1978).

An adequate accounting system was not in place to manage the increased volume of funds for lending as a result of the Indian Finance Act. The GAO noted that this deficiency was brought to the attention of the Bureau two years earlier, but not corrected.[25]

Loan files were found to lack the required documentation on loans made under the Guaranteed and Insured Loan Program. "Some of the files reviewed were missing plans of operation and adequate feasibility studies of the enterprises. Most of the files did not have loan-closing documents, such as copies of notes and collateral." [26]

The GAO's review of loans in default indicated a limited evaluation of loan proposals. GAO stated that the Bureau's analysis were inadequate and relied on evaluations of commercial lenders which were considered superficial.

Also noted was limited loan servicing by lenders of guaranteed loans. The Office of Audit and Investigation of the Department of the Interior stated that the Bureau must establish a monitoring reporting system, but BIA officials demurred, stating that it lacked the staff or the funds to do so.[27]

Another problem noted by the GAO was that short repayment terms could impair the objectives of the program. "Short repayment terms created a large repayment schedule in the formative years of a new business and could possibly be a major factor in the failure of some businesses." [28]

Inadequate technical assistance

Another major deficiency noted by the GAO, as well as the American Indian Policy Review Commission and the Young President's Organization [29] were the limited management and technical assistance provided. The GAO noted, for example, that of the four defaulted guaranty loans examined, only one borrower had received technical assistance.[30] The American Indian Policy Review Commission found that BIA staff lacked the necessary skills to provide meaningful technical assistance. The Commission concluded that the Agency did not have personnel who were "appropriate to the requirements of a specialized technical assistance effort. There are no specialized technicians within the Bureau of Indian Affairs to provide for the rapidly increasing demand for specific expertise in highly technical areas. The depth of training and necessary experience precludes using or retaining existing personnel, in most cases. The present autocratic organizational structure is also not flexible enough to permit technicians to move quickly from area to area." [31]

The Young President's Organization in a later study stated that "On each visit, we heard pleas for meaningful technical assistance and management help. We were unable to identify any case where the IFA (Indian Finance Act) had provided effective technical assistance, probably because it is available under the IFA Act as a 'last resort' source . . . such assistance was less than useful. A budding enterprise cannot wait for various government agencies to negotiate which one can and should provide technical assistance."[32]

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[25] *Ibid.*, pages 33-34.

[26] *Ibid.*, pages 34-36.

[27] *Ibid.*, pages 37-38.

[28] *Ibid.*, pages 38-40.

[29] In the Spring of 1976, members of the Young Presidents Organization, (YPO), a national organization composed of corporation presidents under the age of 40, studies the operation and administration of the Indian Finance Act and its impact on reservations for the BIA and the Secretary of Interior.

[30] GAO (1978), page 42.

[31] AIPRC.

Insufficient funding

Regarding the inadequate level of funding the Policy Review Commission stated why federal efforts to date have not been sufficient. "The problem is not that federal efforts have failed to produce any economic development on Indian reservations, but rather that the rate of economic development has not kept pace with the rising level of need associated with both the rising American Indian population and the rising cost of the average level of living of all American people. For example, while some increases in American Indian employment have occurred as a result of economic development efforts on Indian reservations, the rate of increase in employment has not kept pace with the rate of increase in the American Indian labor force, with the result being increasingly higher rates of unemployment among American Indians. Similarly, there have been some increases in American Indian per capita income, but the rate of increase in these per capita incomes has not kept pace with either the rate of inflation or the rate of increase in the average American per capita income, with the result that the disparity between non-Indian and Indian per capita incomes has been increasing in both real and relative terms. Indeed, the rate of increase in the poverty level of income has been faster than the rate of increase in American Indian incomes, with the result that more, rather than fewer American Indians are living below the poverty level."[33]

It may not be reasonable to assume that the problems outlined above, can effectively be solved by a federal agency operating with limited staffs on annual appropriations, especially in view of the recent cuts in the federal budget proposed by the Administration. A recent analysis[34] of the cuts reveals that, the budget will result in no more funds available from EDA in Fiscal Year 1981 for tribal projects and planning because of a recession of two-thirds of the FY '81 funds for Indian programs. All economic development grants, loans and loan guarantees provided to tribes by EDA, the Community Services Administration and the Farmers Home Administration will be terminated by FY '82 and planning support for economic development will cease in FY '83. It is clear that federal funds, which were previously inadequate, will be woefully inadequate.

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[32] YPO, page 14.

[33] AIPRC, page 131.

[34] Council of Energy Resource Tribes, "Highlights of Reagan Budget Revisions." Memorandum, 1981.

THE NEED FOR AN INDEPENDENT DEVELOPMENT FINANCE INSTITUTION

As shown in the previous discussions, the unique economic and institutional conditions of Indian country have created a situation where development capital for reservation-based economic ventures is difficult to assemble. Indian tribes and Indian individuals do not have sufficient equity in the form of savings or excess revenues to capitalize their projects. Because of protective devices placed around Indian reservations, Indians experience great difficulty in accessing capital and credit from private financial institutions. Lacking internal capital and cut off from private capital and credit, tribes are almost totally dependent upon the Federal Government for development capital. Yet, historically, the administration of these funds has diminished their impact; and the level of funding, previously insufficient, is now about to be significantly reduced.

The need for economic development in Indian country persists. Based upon the preceding discussion, what is required is a new independent and autonomous institution which consolidates the economic development functions previously performed by agencies soon to be curtailed or abolished. This institution should be structured to provide improved technical assistance, project evaluation, loan review and monitoring to increase the success of development projects in Indian country.

Findings of the American Indian Policy Review Commission

In 1976, the American Indian Policy Review Commission's Task Force on Reservation and Resource Development and Protection recommended that all development-related federal funding for Indians be consolidated into a independent American Indian Development Authority (otherwise called the American Indian Development Finance Institution), which institution would be authorized to make all necessary grant and loan commitments for the entire duration of multi-year comprehensive development plans prepared by Indian tribes. The Commission determined that what was needed was a "new orientation" for Indian reservation development, and that federal funds should be administered so that they "are spent in the right places at the right time and on the causes of underdevelopment, rather than on the symptoms. Rather than spending funds for providing housing for those who cannot afford it, and training for jobs which do not exist, these funds should be spent for reservation resources and industrial development and the necessary infrastructures to sustain this." [35]

The Policy Review Commission proposed that the "mechanism to administer this new program is an American Indian Development Authority (AIDA) created by Congress as an independent Federal agency. It shall be the function of AIDA to provide Indian reservations with technical assistance funding and development capital to prepare and implement comprehensive development plans. Initially it shall coordinate, and eventually consolidate all development related federal funding for Indians from current categorical grant programs." [36]

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[35] AIPRC, page 131.

[36] *Ibid*, page 132.

The Commission concluded that this "approach to reservation development will make economics work for Indians rather than against them. This is the American Indian version of a model applied with some success in other under-developed economies. By pursuing development in a manner which emulates the way in which successful development has taken place elsewhere, reservations should be able to reach the necessary threshold levels of economic activity which will make possible a self-generating, self-sustaining economy."[37]

The creation of an American Indian Development Finance Institution, in light of the economic policies articulated by the current Administration, should be seen as an opportunity to demonstrate that the administration is now charting a course for development of Indian economics through a partnership arrangement. And that this new arrangement will enable tribes to overcome government dependence by focusing on investments which will maximize the rate of return on capital and contribute positively to the capital structuring and formation process of Indian country.

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ESTIMATION OF CAPITAL NEEDS FOR AN AMERICAN INDIAN DEVELOPMENT FINANCE CORPORATION

By Ronald L. Trosper

INTRODUCTION

Those working on the development of an American Indian Development Finance Corporation in several meetings discussed the question of determining the Indian capital need. Two methods of estimating capital requirements for an AIDFC have been proposed. One is a "macro" and one is a "micro" approach. The macro approach would take aggregate data on the Indian population and on the national economy to calculate the capital needed either to close an income gap or to remove high rates of unemployment. The micro approach would collect a list of feasible projects from reservation planners in an attempt to estimate the current supply of projects for such an institution.

This paper takes the macro approach. It used to be common in development planning to use capital-output and capital-labor ratios in planning. Neither technique is perfect, and both could be criticized for unrealistic assumptions and lack of detail. But if the goal is modest, to obtain a ballpark estimate of need, perhaps the exercise is worthwhile. One must emphasize that the calculations presented in this paper are intended only to establish the general magnitude of need for one type of capital among Indians.

The first macro method uses a capital-income ratio to calculate the additional capital needed to support additional income. The second uses a capital-labor ratio to estimate the additional capital needed to provide additional jobs. In the first approach, one calculates an income gap that needs filling; in the second, one estimates the number of needed jobs.

It would be desirable to make the calculations for 1980, the year just past. But one must recognize that there is a lag in the publication of data. The Bureau of the Census has only just begun to issue its reports from the 1980 Census. National data on Indians from the Volume I series will be available soon, but not yet.

As an alternative, calculations in this paper are based upon data from 1969. This has several advantages. First, one can use information from the *1970 Census of Population* to obtain baseline estimates of American Indian income, population, labor force participation, and unemployment. Although it probably undercounted Indians, and although it used self-identification, the 1970 Census remains a more reliable source than estimates of income and unemployment from the Bureau of Indian Affairs. If our eventual audience is Congress, estimates based on Census sources will be easier to defend.

A second advantage of using 1969 is that John W. Kendrick's book, *The Formation and Stocks of Total Capital* (2), provides a comprehensive statement of the capital stock of the United States in 1969.

A third reason to use 1969 is that the economy was in a position of full employment, prior to the troubles of the 1970's. The national unemployment rate averaged 3.5 percent in 1969 and 4.? in 1970. Thus, all Indian unemployment in 1969 and 1970 can readily be assumed to be "structural" rather than "cyclical" unemployment.[1] In addition, CETA did not exist; if one believes that many CETA jobs are a form of welfare rather than productive employment, use of data prior to CETA omits any reduction in unemployment due to CETA jobs. One could consider using data on Indians in the Survey of Income and Education, a survey conducted in the spring of 1976. Because the economy was coming out of a recession at that time, that data would impart an upward bias to observed unemployment as an estimate of structural unemployment among American Indians. The national unemployment rate in April 1976 was 7.6 percent. It has averaged 8.5 percent in 1975.

For these three reasons, therefore, estimates of the capital requirements for an AIDFC are made using 1969 data. These estimates are then extrapolated to 1979 using a price inflator to take account of changes in the value of the dollar and a population growth factor to take account of changes in the number of Indians. When the 1980 Census data are available, the estimates can be updated using its results for income, labor force participation, and unemployment.

INCOME AND POPULATION DATA, 1969

Table 1 presents data on Gross National Product, Net National Product, National Income, and Personal Income from the National Income and Product Accounts (NIPA) for 1969. When divided by estimated national population in 1969, the result gives several measures of income per capita. The table also gives estimates of per capita income from the 1970 Census. Census data is based upon the population of April 1, 1970, and the income reported for that population in 1969. One needs to use the Census data in order to compare American Indian income to national income. But one needs to use the NIPA data for 1969 for comparisons to Kendrick's capital data. Fortunately, NIPA's Personal Income corresponds closely to Census income.[2]

Census data on personal income reveal that American Indians received about half as much income per capita in 1969 as did the nation as a whole. The exact value is $1573/3139, which equals .5011. Applying the ratio of per capita incomes in the 1970 Census to the 1969 NIPA Personel Income per capita ($3703), it appears that for all Indians a gap of (.0511) × ($3,693) = $1,856 existed in 1969.

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[1] Cyclical unemployment is caused by recessions, which occur when general demand for goods and services is below the capacity of the economy to produce them. Structural unemployment is caused by factors unrelated to the level of general demand. Two examples are discrimination and geographical immobility.

[2] The Census definition of income is closest to the Personal Income concept in the National Income and Product Accounts. These accounts are produced by the Bureau of Economic Analysis in the Department of Commerce. NIPA's Personal Income includes imputed rent for owner-occupied housing, which is omitted by the Census. The NIPA data also provide better estimates for property and transfer income, which tend to be underreported in the Census. As shown by Table 1, the difference amounts to $531 per person, using the Census population data. This is the difference between $3670 and $3139. The population figure in row five, 203,210,000, is from the *Statistical Abstract* and is the Census number rounded to five significant digits.

Table 1 gives two sets of population figures. One is the national population for 1969. The other is the national population figure in the 20 percent count of the 1970 census, and the corresponding figure for American Indians. Three different population counts are available in the 1970 Census, a full count, a 20 percent sample, and a 15 percent sample (5). The respective counts are 792,730; 763,594; and 760,572. The calculations presented below are based on the 20 percent count. If one wishes to adjust them to the full count, the totals should be multiplied by 1.038. Average figures should not be adjusted.

TABLE 1.—INCOME AND POPULATION DATA, 1969 AND 1970

	Total value 1969 dollars (billions)	Population 1969	Value per capita
Bureau of Economic Analysis:[1]			
GNP [2]	$953.5	[3] 201,385,000	$4,645
NNP [2]	853.1	201,385,000	4,236
National income [2]	767.9	201,385,000	3,813
Personal income [2]	745.8	201,385,000	3,703
Do [2]	745.8	203,210,000	3,670
Bureau of the Census:			
Per capita income, 1969:			
Nation [4]		203,212,877	3,139
American Indians [5]		763,594	1,573

[1] Economic Report of the President, January 1978, Table B-17.

[2] Often when United States income is compared to that of other countries, GNP is the income measure used. GNP minus depreciation allowances for business equal Net National Product. NNP minus indirect business taxes equals National Income. To go from National Income to Personal Income requires several steps. The main ones are to subtract undistributed corporate profits and social security taxes, and to add transfer payments. Details are in Footnote 3, Table B-17.

[3] Statistical Abstract of the United States, 1974, p. 5.

[4] U.S. Bureau of the Census, Census of Popuation: 1970 General Social and Economic Characteristics, Final Report PC(1)-C1, United States Summary, Table 94.

[5] U.S. Bureau of the Census, Census of Population: 1970, Subject Reports, Final Report PC(2)-1F, American Indians, Tables 1 and 9.

The full count for American Indians and Alaskan Natives has just become available for 1980 (7). The population was 827,268 in 1970; in 1980, 1,418,195 American Indians, Eskimos, and Aleuts were counted. This represents an increase of 71 percent. Some of the increase is due to a natural population growth, some is due to a better count of Indians, and some may be due to additional numbers of Indians and Alaskan Natives identifying themselves. The combination of these factors is unknown. Whether the data in 1970 is a biased or an unbiased estimate of true levels of income and employment in 1970 is also unknown. In the following calculations, 1970 data is taken as an accurate estimate of average income, unemployment, and participation rates for Indians. Population total values are scaled upward by 1.71 in order to project the results to 1980. This should adjust simultaneously for all the factors which account for the changes in the population count between 1970 and 1980.

CAPITAL IN 1969

Much of the income gap can be attributed to different levels of ownership of "capital" by Indians compared to the whole nation. Kendrick (2) ambitiously attempts to estimate the net value of *all* capital, human as well as nonhuman. He adopts a four-fold classification; tangible nonhuman, intangible nonhuman, tangible human, and intangible human. Examples of tangible nonhuman capital are the equipment, inventories, and structures of a factory. Intangible nonhuman capital is knowledge gained from research and development. Tangible human investments are the costs of rearing children to age 14; intangible human investments are education and training, health maintenance, and migration.

Kendrick estimates the amount of each of these four types of investment for three sectors: Persons, Business, and Government. Table 2 is a reproduction of his summary table for 1969.[3] In 1969, the total net value of capital in the United States held by all sectors was 6,920.4 billion dollars. This figure was obtained by adding all past investments and subtracting estimated depreciation of each type of capital. For the purposes of estimating figures for an AIDFC, we are interested in just part of this table, estimated tangible capital held in the business sector. This figure, $1,252.1 billion, is the appropriate figure because we have viewed the AIDFC as applicable to directly productive investments undertaken by Indian individuals, businesses, and governments.

It may be surprising to discover that tangible business capital is only 18 percent of all capital in the United States, and only 41 percent of all tangible nonhuman capital. The per capita income of the United States is supported by a wide variety of capital. Similarly, an AIDFC, oriented toward creation of tangible business capital, cannot close the entire income gap between Indians and others in the United States. Human capital must also be created and utilized.

TABLE 2.—NET NATIONAL CAPITAL OF THE UNITED STATES, BY TYPE AND SECTOR, 1969

[Billions of current dollars]

	Nation	Persons	Business	Governments
Nonhuman	3,220.5	1,103.0	1,306.5	811.1
Tangible	3,035.6	1,091.5	1,252.1	692.0
Land	686.8	174.3	393.7	118.8
Structures	1,376.1	515.9	423.0	436.3
Equipment	617.4	284.0	230.7	102.7
(Military)	(146.8)			(146.8)
Inventories	355.3	117.3	203.8	34.2
Intangible	184.9	11.5	54.4	119.1
Human	3,699.9	2,695.9	169.5	834.5
Tangible	1,146.9	1,146.9		
Intangible	2,553.0	1,549.0	169.5	834.5
Education	2,267.3	1,334.1	162.4	770.9
Health	241.7	175.0	5.0	61.7

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[3] He also provides summary tables for 1929 and 1948, as well as numerous breakdowns of the data for every year between his benchmark years.

TABLE 2.—NET NATIONAL CAPITAL OF THE UNITED STATES, BY TYPE AND SECTOR, 1969—Continued

[Billions of current dollars]

	Nation	Persons	Business	Governments
Mobility	43.9	40.0	2.0	1.9
Total—domestic	6,920.4	3,798.9	1,476.0	1,645.6
Net foreign assets	69.2			
Total—national	6,989.6			

Source: John W. Kendrick, The Formation and Stocks of Total Capital, (New York: Columbia University Press, 1976), p. 51.

Using the 1969 total population of the United States, the value per capita of business tangible nonhuman capital is $6,217. The value of income per capita in 1969 is $3,703. The ratio of these numbers, the capital-income ratio, is 1.679.[4]

Table 3 presents two important ratios which will be used in subsequent sections. The first is the capital-income ratio, 1.679. The second is the ratio of tangible nonhuman capital in the business sector to the total employed non-governmental civilian labor force in 1969. This ratio is $19,058.

CAPITAL-INCOME RATIO METHOD

Table 4 presents the calculation of capital needs in 1969 using the capital-income ratio. There is a gap of $1,856 per person between Indians and non-Indians in 1969, as reported in Table 1. Multiplying this gap by the capital-income ratio of 1.679 from Table 3 gives a capital value of $3,115 per person. Since Indian populations was 763,594 according to the 1970 Census (20 percent count), the total capital need in the business sector was $2,379,000,000 in 1969.

It remains to transfer this estimate to 1969. First, an adjustment in prices is needed. The price index for gross private nonresidential investment is appropriate. Prices for these goods increased 1.978 times between 1969 and 1979 ((1), Table B-3; (9)). In 1979 prices, therefore, the capital need for the population in 1969 was 1.978 times $2,379,000,000 or $4,405,000,000. The final adjustment is to multiply by the increase in counted population, 1.71, for a total estimate of $8,050,000,000.

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[4] Those accustomed to capital-output ratios will be surprised, for such ratios are commonly assumed to range around 3. This larger number is usually derived by adding up all tangible nonhuman capital. If this is done for all three sectors using Kendrick's data, and GNP is used as a measure of output, the resulting ratio is 3035.6/935.5=3.24, which is above the usual ratio because so much government capital and all consumer durables are included.

Table 3.—National capital-income and capital-labor ratios, 1969

Item	*Value*
(1) National net tangible nonhuman capital, business sector, 1969	$1,252,100,000,000
(2) National personal income, 1969	$745,800,000,000
Ratio, (1)/(2) (capital/income)	1.679
(3) Total civilian employment, 1969	77,902,000
(4) Government wage and salary workers	12,202,000
(5) Total number of nongovernmental workers, 1969 ((3)—(4))	65,700,000
Ratio, (1)/(5) (capital/labor)	$19,058

Sources: John W. Kendrick, *The Formation and Stocks of Total Capital,* New York: Columbia University Press, 1976, p. 51; (2) *Economic Report of the President,* January 1978, Table B-17; (3) *Ibid.*, table B-27; (4) *Ibid.*, table B-34.

Table 4.—Indian capital needs using the capital-income ratio method

Item	*Value*
National per capita personal income, 1969	$3,703
× Ratio of Indian to national per capita income, 1970 Census	.501
= Per capita income gap	$1,856
× Net national tangible nonhuman capital per dollar of personal income, 1969	1.679
= Capital needed per person	$3,116
× Indian population, 1969	$763,594
= Capital needed, 1969	$2,379,000,000
× Price increase, 1969-79, for nonresidential fixed investment	1.978
= Capital needed in 1979 prices	$4,706,000,000
× Increase in count of Indians, 1970-80	1.71
= Estimated capital need, 1979	$8,046,000,000

Assuming, therefore, that Indians did not gain upon the national average per capita income during the 1970's, that the Indian data in 1970 represents average income level for the population which was later enumerated in 1980, and that the capital-labor ratio remained unchanged between 1970 and 1980, we have a total estimated need for business capital of $8 billion dollars.

CAPITAL-LABOR RATIO METHOD

Table 3 gives an average amount of business sector capital of $19,058 per worker in 1969. This number will be combined with an estimated number of jobs needed in 1969 to provide a second, lower, estimate of capital need in 1969. The estimate is lower than the one in section 4. One reason is that no upgrading of the capital per already employed Indian worker is allowed for in this procedure.

Table 5 gives the percentages which are used to obtain an estimated "job gap" in 1969. The first column gives national labor force participation and unemployment rates for all males and females as reported in the 1970 Census of Population. The second column gives the proportions for American Indians. Because unemployment is cyclical phenomenon, it is important to use data which applies to the same period of time for both the nation and Indians. In this case, the period is the week before the census day, April 1, 1970.[5] Indians have a lower rate of labor force participation for both sexes; this rate is based upon the population 16 years old and over. Once in the labor force, Indians experienced higher rates of unemployment than did the nation as a whole.

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[5] The Census data applies to late March, 1970. Kendrick's capital data apply to 1969. Although the two do not match exactly, they are close enough for providing ballpark estimates, which is the goal of this paper.

TABLE 5.—LABOR FORCE PARTICIPATION AND UNEMPLOYMENT RATES PERSONS 16 YEARS OLD AND OVER, APRIL 1, 1970

	All races [1]	American Indians [2]
Males:		
Civilian labor force participation	.759	.621
Unemployment rate	.039	.116
Females		
Civilian labor force participation	.413	.353
Unemployment rate	.052	.102

[1] U.S. Bureau of the Census, Census of Population: 1970, General Social and Economic Characteristics, Final Report PC(1)-C1, United States Summary, Table 90.

[2] U.S. Bureau of the Census, Census of Population: 1970, Subject Reports, Final Report PC(2)-1F, American Indians, Table 4.

An estimate of jobs needed can be derived by applying the national rates of participation and employment to the Indian population. Since the data is taken from the 20 percent count of the census, the estimated population from that count is used here. Table 6 demonstrates the calculation. National rates are applied to the Indian population; then actual Indian employment is subtracted from the estimate of Indian employment at national rates. This leads to an estimated shortfall of 55,874 jobs.[6]

TABLE 6.—EXPANDED INDIAN LABOR FORCE, 1970

	Males	Females
Total civilian population 16 years old and over [1]	212,108	233,266
× National labor force participation rates (table 5)	.7590	.4133
= Expanded labor force	160,990	96,409
× National rate of employment	.9610	.948
= Employed Indians at national rates	154,711	91,396
− Actual Employed Indians [1]	116,467	73,766
= Needed jobs at national rates	38,244	17,630
Grand total	55,874	

[1] U.S. Bureau of the Census, Census of Population: 1970, Subject Reports, Final Report PC(2)-1F, American Indians, Table 4.

This calculation has taken into account the phenomenon of the "discouraged" worker, the person who leaves the labor force because of the lack of jobs. All of the difference in national participation and Indian participation rates is attributed to this reason. In this way, some of the rationale behind BIA data is taken account of; the BIA includes persons not at work and not looking for work in its estimates of unemployed persons. In 1970, the BIA reported that the national unemployment rate was 28.6 percent for all Indians and 41 percent for reservation Indians ((3), Table 3). The BIA's unemployment rate is larger than the conventional rate by definition. The conventional rate counts only those actively seeking work as unemployed; the BIA counts as unemployed all those not at school and not at work who are of working age. If one were to use the BIA's definition of unemployment, the discouraged workers would be included in the labor force and the unemployed. One can therefore calculate the implied unemployment rate of Table 6 with the BIA definition. For males, the unemployment rate would be 27.8 percent; for females it would be 23.2 percent. These figures are quite close to the BIA's figure for all Indians in 1970.

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[6] Since national rates have been applied, some Indians would still be unemployed if all these jobs were found. The figure in the text is the number of unemployed and discouraged workers above national rates. One could use the high rates of unemployment in the 1976 Survey of Income and Education to test this figure. For all Indians in the lower 48 states, 35,613 females and 37,030 males were looking for work. During that recession year, more Indians were out of work than the text estimates the job gap was in 1969.

Table 7 presents the estimation of needed capital based upon a capital-labor ratio method. The number of needed jobs, 55,874, is multiplied by the national average level of capital per worker, $19,058. This gives an estimate of $1,065 million in 1969. Applying the price inflator of 1.978 and the population growth factor of 1.71 gives an estimate of $3.6 billion in 1979.

Table 7.—Indian capital needs using the capital-labor ratio method

Item	*Value*
Number of additional jobs needed, April 1, 1970	$55,874
× National net tangible nonhuman capital per nongovernmental worker, 1969	$19,058
= Needed capital for additional jobs, 1969	$1,065,000,000
× Price increase, investment goods, 1969–79	1.978
= Needed capital in 1979 dollars	$2,106,000,000
× Population growth, 1970–80	1.71
= Needed Capital in 1978, capital-labor ratio method	$3,600,000,000

We have therefore estimated that the capital needed in the business sector to move Indian employment to national levels in 1979 is about 3.6 billion dollars. A number of assumptions underline this estimate. First, we have assumed that the number unemployed and discouraged workers are 1.71 × 55,874, which is 95,544 workers in 1979. Second, we have made no correction for the positive net investment per worker which occurred in the business sector between 1969 and 1979. (To make this correction would require considerable effort.) Since significant positive net investment occurred, our estimate is too low on this account. Another reason this method gives a low number is that no provision for increasing net capital per worker for already employed Indian workers is assumed. Yet a fourth factor is that 1969 and 1970 were years of high employment. Recent years have seen much more reported unemployment. Unemployment, by reducing the number of workers, increases the amount of capital per worker, for unemployed machines are not subtracted from an estimate of net business capital. Thus, when data become available to compute capital per worker in 1979, the number may be high compared to our estimate. Fifth, CETA was implemented in the 1970's; by providing public sector jobs, CETA lowers reported unemployment. When 1980 Census data are available, the effect of CETA will have to be kept in mind.

CONCLUSION

This paper has presented two alternative estimates of the capital needed in 1979 by American Indians to bring their business sector up to national levels. Using a capital-income ratio, the need is approximately $8 billion. Using a capital-labor ratio, the need is approximately $3.6 billion. In both cases, the type of capital is net nonhuman tangible capital in the business sector, namely, equipment, structures, inventories, and land. This approach has ignored other types of capital which Kendrick identifies, and which are also needed in Indian communities.

Table 2 of this paper reproduced Kendrick's data for 1969. Only 18 percent of all capital in the United States is tangible capital held by the business sector. Persons and governments together own more tangible nonhuman capital than does the business sector. The value of all human capital in the United States, according to Kendrick, exceeds the value of all nonhuman capital. This paper's attention is restricted to only a portion of the total types of capital which are important. Additions to the stock of tangible capital in the Indian business sector should be accompanied by investments in other types of capital to be fully successful.

Of the two approaches, the capital-income approach is the more comprehensive, for it implicity involves upgrading the quantity of tangible nonhuman capital per Indian person, rather than per Indian unemployed worker. Since some Indians are employed at jobs with below average capital per worker, the income approach gives a larger estimate.

Both approaches assumed that *average* ratios are good estimates of *marginal* ones. For instance is it safe to assume that the capital needed per additional worker is the same amount as the average capital per worker now employed? Since capital valued at historical cost underestimates its replacement cost, Kendrick's figures may be too low. See (10) for a discussion of this. Therefore, the estimates of this paper are also too low as far as this aspect is concerned.

Several more steps are required to turn an estimate of general capital need into a recommendation for the capitalization of an American Indian Development Finance Corporation. Some factors should be taken into consideration in transforming these numbers into an amount for a new institution. The geographical location of Indian communities and enterprises to be aided is one such issue; the numbers in this paper are for Indians residing both on and off reservations. The ability of Indian communities to develop good projects, and the ability of a new institution to evaluate and fund such projects will set one upper limit on the rate of growth of the enterprise. There will be a period of learning early in the life of a new institution. Another limit to growth will be the amounts available from the federal government and other sources, both for the American Indian Development Finance Corporation and for the projects which it sponsors. For these reasons, the scope of this paper does not include converting a macro estimate of capital need into a recommendation for the capitalization of a new institution.

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INITIATIVES IN DEVELOPMENT FINANCE

By Lorraine Turner Ruffing

INTRODUCTION

American Indians and Alaskan Natives experience poverty and unemployment to an extent unequalled by any other group in America. They are among the poorest Americans. Rural Indian income per capita is $3,246 compared to the US average $8773 (1979).[1] Indian unemployment on reservations is approximately 40 percent as compared to the US average 6 percent (1979).[2]

The causes of such unparalleled poverty and unemployment have been widely studied beginning with the Merriam Report in 1928. Although the origin of such poverty is strongly connected to the loss of land under the allotment policy, failure to build strong reservation economies upon the remaining land is also a contributor to contemporary poverty. A recent thorough examination of Indian economic conditions found that reservation development under Indian direction is held back because Indians lack effective control over their land and resources, have limited access to long-term capital, and have developed few managerial and technical skills.[3]

The combination of such obstacles has greatly limited the establishment of reservation-based enterprises that employ Indians. While various income-maintenance programs have alleviated extreme poverty, such programs have bred dependency and social disintegration and have failed to help Indian communities attain self-sufficiency.

The purpose of this paper is to explore specific ways of promoting Indian business development given the political, legal and economic environment in which these enterprises must function. Although economic development is more than business development, it cannot occur without it.[4] While the federal government has had some success in providing Indian reservations with a minimum amount of infrastructure, health-care and educational facilities, its efforts to promote productive enterprises on a significant scale have failed. Because the need for Indian business development is so acute, this paper focuses almost exclusively on ways and means to encourage it.

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[1] In 1969 the ratio of rural non-farm Indian income per capita ($1147) to national income per capita ($3139) was .37. This ratio, .37, was applied to the 1979 personal income per capita, $8773, to derive the corresponding figure of $3246 for rural Indian income per capita. Personal income per capita is from the Bureau of Economic Analysis, U.S. Dept. of Commerce, 1979. These figures will be revised once the 1980 U.S. Bureau of Census figures are available.

[2] J.R. Brown, "Preliminary Report on the Economic Development Needs Assessment Survey," American Indian Development Corporation, Albuquerque, N.M., 1980; and BIA, "Local Estimates of Residents: Indian Population and Labour Force," April 1979.

[3] American Indian Policy Review Commission, Task Force Seven, *Final Report on Reservation and Resource Development and Protection*, (Washington, D.C.: USGPO, 1976). Other studies include: General Accounting Office, "More Federal Efforts Needed to Improve Indian's Standard of Living Through Business Development," Washington, 1978; M. Udall, "Indian Natural Resources Development Act of 1979," General Accounting Office, "Better Overall Planning Needed to Improve the Standard of Living of White Mt. Apache of Arizona," Washington 1975; "Land Management Activities on Three Indian Reservations in S. Dakota Can Be Improved," Washington 1975; "Indian Natural Resources—Opportunities of Improved Management and Increased Productivity," Washington 1975; "Expenditures Benefiting American Indians", Washington, 1975; "Improving Federally Assisted Business Development on Indian Reservations," Washington 1975; "Land Leases on Fort Hall Indian Reservation in Idaho," Washington 1974; U.S. Congress Senate, "Financing the Economic Development of Indians and Indian Organizations," *Hearing* before Subcommittee on Indian Affairs, May 31, 1973; General Accounting Office, "Increased Income Could Be Earned on Indian Trust Monies Administered by the Bureau of Indian Affairs," Washington 1972; Joint Economic Committee, *Toward Economic Development for Native American Communities*, 91st Cong. 1st Session 1969.

The paper considers various remedies for the main obstacles to business development: lack of access to capital and the lack of Indian managerial skills. As a background for understanding the conclusions and recommendations presented here, Section II briefly examines why existing institutions and programs have failed to provide access to capital and management training.

Lack of access to long-term capital and absence of managerial skills are rather common obstacles to economic development in rural areas and Third World countries. The third and fourth sections of the paper analyze various domestic and foreign development finance programs and institutions which have been created to facilitate the flow of capital and the acquisition of skills. It identifies the structural and operating characteristics which have contributed to their success.

The fifth section discusses the most appropriate structure, source of funds, use of funds and operating policies for an American Indian development finance institution taking into account the unique legal and economic environment in which the institution will function. A glossary is attached which defines all technical and financial terms used in this working paper.

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[4] Economic development is a broad term which is usually defined as an improvement in the population's well being or living standards. One indicator is the level of productive income per capita. Economic development can be achieved by investing in education, on-the-job training, health; in infrastructure such as roads, ports, railroads, electricity and telecommunications, and in business enterprises. Thus, investment in business enterprises is just one element in promoting economic development.

Chapter I—Need for a New Development Finance Institution

This section briefly assesses the record of various federal programs, commercial institutions and tribal governments in providing long-term capital and management assistance for Indian business development. A more comprehensive review can be found in "Institutional Barriers to Financing Development Projects in Indian Country," written for the American Indian Development Corporation.

Federal programs

Between 1966 and 1980 various federal agencies provided funds for business development in the form of categorical grants, direct loans, loan guarantees and interest subsidies. Most of this aid was given in a piecemeal, uncoordinated fashion which greatly diminished its impact. Most projects were funded in the absense of feasibility studies, or objective project selection criteria. In addition the federal agencies did not adequately monitor the project or provide training and management assistance.

The General Accounting Office, the Department of Interior's Office of Audit and Investigation and numerous consultants' studies have evaluated the impact of various business development programs.

The largest and most significant programs were run by the Economic Development Administration (EDA) and the Bureau of Indian Affairs (BIA). Both were severely criticized by the General Accounting Office (GAO) in 1975 and again in 1978 for not undertaking adequate feasibility studies, for not providing needed technical assistance to new businesses and for not monitoring their projects.[5, 6]

GAO was hopeful that, with the passage of the Indian Financing Act in 1974, the BIA's ability to finance reservation economic development would be significantly enhanced. The Act increased the revolving loan fund by $50 million, provided $200 million in loan guarantees and $10 million per year in business grants for three years. Unfortunately, the authorized funds were never fully appropriated.

TABLE 1.—STATUS OF THE INDIAN FINANCING ACT

Item	Number projects	Appropriated disbursed (millions)	Per project
Revolving loan funds	317	$63.2	$200,000
Loan guarantees	110	65.8	600,000
Grants	1,577	23.1	15,000

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[5] Eric Natwig, "Institutional Barriers to Financing Development Projects in Indian Country" (1981).

[6] GAO, *op cit.* p. 29 (1978).

Those funds which were released did not have the intended impact for a number or reasons.

First, many loans and loan guarantees were given without feasibility studies or even assurance or repayment. Second, the BIA lacked an automated accounting system to keep track of loans. Third, commercial lenders did not properly service the loans and they shortened repayment periods to ten years or less, thus imposing an increased financial burden on new businesses during the crucial start-up phase.

The grant program provided equity capital to Indian businesses. Given the absense of any qualitative selection criteria, most of the grants were made on the basis of political pressure rather than as part of the package for financing business development.[7]

Commercial institutions

It is commonly believed that commercial banks are a source of development capital. However, the terms and conditions of most commercial bank financing in the U.S. are inappropriate for long-term development projects. Commercial banks have little venture capital and they rarely make long-term loans.

In addition to the lack of long-term capital there are legal barriers which prevent commercial banks from lending to Indian tribes and individuals. Commercial banks must obtain acceptable collateral which Indian clients can rarely provide due to the trust status of Indian land. Commercial institutions have sometimes accepted non-trust assets such as future sales revenues; assignment of lease income or; certificates of deposit; leasehold interest mortgages.[8]

Such devices do not deal with the barriers created by tribal sovereignty and jurisdiction. In case of default tribal governments are reluctant to have disputes settled in non-tribal courts or allow non-Indians to enter reservation land to repossess assets. Nor do non-Indians like to be subject to tribal jurisdiction and only the more adventuresome will accept the use of unique forms of collateral.

Even if short term capital were appropriate and there were no legal barriers, commercial banks lack adequate information about reservation investment opportunities and are unable to identify viable projects or perform feasibility studies.

Another obstacle which prevents commercial banks from lending to Indian people is the banks' inability to provide the necessary technical assistance. While many Indian ventures promise high rates of return, they involve unusual technical or managerial problems which raise the bank's perceived level of risk. Risk can be reduced by proper project appraisal, technical assistance, monitoring and follow-up—all of which are too expensive for commercial banks to provide.

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[7] Ibid.

[8] A useful device called the leasehold interest mortgage is infrequently used by commercial banks. Some federal lending agencies use this device which is a lien on the physical assets and not on the trust property and further gives the tribe the first right of refusal in case of default.

Indian sources of capital

Frequently mentioned sources of investment capital are tribal trust funds and annual revenues from tribal resources. The trust funds are very unevenly distributed among Indian people. The federal government, as trustee, requires that the Branch of Investments, BIA, invest tribal trust money in financial investments which are fully guaranteed. Even when the tribal governments exercise control over these funds they usually prefer to invest in risk-free government securities because their revenue base is both meager and precarious. For some it it their only source of revenue. Other sources of tribal investment funds are annual rents and royalties from resource development. However, such resource rents are unevenly distributed among tribes. Many tribes use the bulk of the funds to pay for tribal government and some social services. A few very rich tribes do invest portions of their resource rents in reservation development.

There is now a move in Congress to allow tribal governments to issue tax-exempt bonds as do states and municipalities. Even if this privilege were granted there are still problems arising from the marketability of tribal bonds and the restrictions on the use of bond proceeds.[9]

Conclusions from past initiatives

Given the dismal record of federal programs and the inability of commercial banks and tribal governments to provide long-term capital, it is apparent that a new, independent financial institution is needed.

This new independent institution would be a source of equity (venture) capital, long-term loans and technical assistance. It would finance viable profit-seeking enterprises. It would seek out those investment opportunities which would have maximum impact on Indian communities in the form of income and employment. Besides coordinating the provision of equity, loans and technical assistance on an objective basis it could also arrange co-financing. The participation of commercial banks could be encouraged by guaranteeing the project loans thus eliminating the need for collateral.

Difficult issues such as the appropriate corporate form which would allow both Indian control and the role of the federal trustee, methods of capitalizaton, use of funds, organizational structure and operating policies will be deferred until after the most relevant domestic and overseas models of development financing have been reviewed in Sections II and III.

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[9] Restrictions on bond proceeds include *who* may use the proceeds and for *what* purpose. For example, industrial development bonds are restricted in size to $10 million and all proceeds must be used for the development of land and property. Also off-reservation activity is limited to "purchase marketing or similar activities which are directly related to the on-reservation activity."

CHAPTER II.—DOMESTIC PROGRAMS AND INSTITUTIONS FOR DEVELOPMENT FINANCING

This section examines a few domestic attempts to establish institutions to provide development financing. The review is selective in that it focuses on the most recent and relevant initiatives which might provide useful lessons in setting up a development finance institution for Indian business development.

National initiatives

The 1970's were marked by a high rate of unemployment among certain groups: minorities, youth and unskilled workers. Often these groups were trapped in the decaying inner cities or were stranded in remote rural areas. To alleviate such structural unemployment a number of measures were proposed to rebuild the private sector economies of distressed urban and rural sectors. An essential element in this renewal effort was the creation of a *National Development Bank.* The bank was to have provided long-term capital to expand or start new private businesses in distressed areas. While such a bank could have stimulated business investment, it was designed in such a cumbersome way that Congress was not convinced it could achieve its objectives. The bank was to have been an interagency institution directed by the Secretaries of Treasury, Commerce and Housing and Urban Development. It would have encouraged the growth of private enterprise by the use of $8 billion in grants, $934 million in taxable development bonds and a $1 billion liquidity facility for the purchase of existing loans. The bill was introduced in 1978 and never got out of committee largely due to the ambivalence of Congress regarding the creation of a new institution with such an awkward management structure.

In contrast another component of the redevelopment strategy, the Urban Development Action Grant (UDAG) was passed in record time precisely because Congress did understand what was involved (i.e., the creation of a new categorical grant program for urban renewal).

After the concept of the national development bank was scuttled, a move was launched to beef-up the Economic Development Administration (EDA) by rewriting its basic legislation. Regional and community development had been an important concern of the federal government since the 1960's. Probably the most significant piece of legislation in this respect was the Public Works and Economic Development Act of 1965 which created the EDA.

The intent was to dramatically increase the financial capacity of EDA enabling it to do what the national development bank was supposed to have done. Instead of creating a new financial institution, the Secretary of Commerce was to have been given the authority to expand on a massive scale, direct loans, interest subsidies and loan guarantees to private businesses which would generate employment in distressed areas. The financial assistance was to be used for land, plant, equipment and working capital and repayment of debts. Aid was to be granted based on employment effects, the degree of distress in the area, and the level of private sector equity investment in the project.

The sponsors requested $570 million annually for the direct loans and interest subsidies and a limit of $1.8–2.5 billion for the guarantee program. Such an expansion in federal lending caused a jurisdictional problem between the congressional public works committee and the banking committees. The jurisdictional dispute got the National Public Works and Economic Development Act (1979) off track and another initiative died in a conference committee.

It is doubtful that this large increase in federal loans alone could have successfully promoted area redevelopment. Key omissions in the legislation were the failure to provide equity funds or a way to strengthen local managerial and technical capacities. Eligibility criteria were too broad and critics recommended that they be tightened in order to narrow target areas and give special consideration to new (less than 10 years) and small (less than $50 million in sales) enterprises. Interest subsidies were seen by some as seldom useful and often abused since the problem of small businesses in distressed areas is often access to capital, not its cost. Loan guarantees were to be used in preference to direct loans and the experience of the Small Business Administration and the Indian Financing Act suggested that loan guarantees unduly reduced the risk to the participating commercial banks with the result that they did not have an adequate incentive to monitor their loans.

Concurrently with these initiatives to promote urban and rural development there occurred other attempts to create development finance institutions. In 1978 a bill was introduced to create a *National Rural Development Bank*. It was felt that the Rural Development Act (1972) was insufficient to provide for the capital needs of rural development projects. The bank, a federally chartered instrumentality, was to be a permanent rural development investment and financial institution. It would issue stock to be purchased by the Secretary of the Treasury, borrowers and joint-venture co-sponsors.[10] The bank could also sell tax-exempt bonds but the federal government was not liable for its debt instruments. Any member of the Federal Reserve System could buy and sell the bank's bonds, debentures and similar obligations. The bank would provide equity financing and loans as well as engage in discounting, rediscounting, refinancing and purchase of the loans from rural financial institutions. (See Glossary.) The bank could also guarantee and insure rural development loans, buy and sell securities it had guaranteed and invest funds not needed in its financing operations. Rural residents, agricultural producer organizations, cooperatives, industrial and commercial enterprises, quasi-public bodies, Indian tribes and local governments were eligible for financing assistance. The funds were to be used for enterprise development, public works, community services or facilities, cooperatives and manpower training. Consequently, the concept of rural development extended beyond business investment but it was felt that the real emphasis would be on public facilities.

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[10] Joint-venture sponsor is an eligible sponsor who joins with the Bank in making a joint-venture equity investment in a rural development project.

A new financial institution was created called the *National Consumer Cooperative Bank* in 1978. Inflation and unemployment had severely reduced the purchasing power of certain groups (the elderly, the poor, the inner-city resident). Consumer cooperatives were seen as a way of increasing competition, narrowing price spreads, raising the quality of available goods and services and strengthening the economy in general. The purpose of the Bank is to promote the growth of self-help, not-for-profit consumer cooperatives and a limited number of producer cooperatives by providing financial and technical assistance. While the Bank's mandate is not business development, it had a number of interesting structural features and operating rules. The Bank started as a chartered mixed ownership *government* corporation. The fifteen-member board was initially appointed by the President; eight from government agencies, one from small business and six from the general public. In 1981 the federal government stepped up the process of withdrawing from the Bank. The existing three Board members remained, nine more Board members were elected and three federal board members chosen by the President were seated during 1982. The corporate powers of the Bank include the power to make and to service loans, to extend guarantees, to furnish financially-related and technical services. To obtain capital the Bank can issue stock and debt obligations (notes, bonds, debentures). The debt obligations may not exceed by more than a factor of ten times the paid-in and surplus capital (debt/equity=10/1).

Initially, the debt obligations were not guaranteed by the U.S. but could be issued to the Secretary of the Treasury. The equity capital of the Bank consisted of three types of stock: Class A preferred stock worth $300 million to be purchased exclusively by the U.S.; Class B common stock to be purchased by borrowers; Class C common stock to be purchased by organizations eligible to borrow, foundations, trusts, or charitable funds or public bodies. Borrowers buy Class B stock with part of the face value of their loans (1-10%). This gradual purchase of cooperative stock by the borrowers has long been used in the Farm Credit System. Class A stock was entitled to receive dividends and was to be redeemed and retired as soon as possible. While the federal government was a stockholder, the Bank's income was exempt from state taxation. As mentioned earlier the federal government has accelerated the process of withdrawing from the Bank. The Treasury is no longer obligated to buy stock (Class A). The Bank has taken out a long term loan (due 1999) to redeem existing federal stock. Henceforth, there will be only two kinds of stock for sale: Class B and C. With the redemption of Class A stock more Board members were chosen by Class B and C shareholders as mentioned earlier.

The U.S. Treasury Department oppposed the establishment of the Bank on the grounds that efficient cooperatives could obtain credit and that the Bank would therefore encourage inefficient cooperatives. It also objected to the fact it was obligated to buy the Bank's debt instruments. Treasury conducted a survey of existing consumer cooperatives and found that its assertion about efficient cooperatives having access to credit was not true. Whereupon it dropped its outright opposition.

The terms of Bank loans are extremely generous—40 years with a five-year grace period. Interest on loans is variable and covers the cost of money to the Bank, administrative expenses, reserves and technical assistance for the loan. Loans must be approved by a committee composed of the President, Chief Loan Officer and Director of Self-Help Development and Technical Assistance. Criteria for loan selection include competent management, sound organizational financial structure, income greater than costs and ability to repay.

The Bank is also allowed to establish regional offices thus overcoming the restrictions against branch banking. A separate Office of Self-Help Development and Technical Assistance has been set up for cooperatives which do not qualify for Bank loans. The Office can give capital grants and interest rates subsidies. It can also provide more in-depth technical assistance and staff training.

The Bank got off to a slow lending start due to organizational problems. The Secretary of Treasury refused to purchase Class A stock except on an "as needed" basis. This meant that virtually all the Bank's capital from Class A shares was "Callable" rather than paid in. Consequently, the Bank was not able to benefit from the investment of surplus funds and depended on annual appropriations to cover administrative costs.

With the early withdrawal of the federal government all areas of Bank operations are being cut back—regional offices, technical assistance, lending, and staff.

TABLE 2.—NATIONAL CONSUMER COOPERATIVE BANK

	1978–81	1982–
Legal status	Mixed-ownership government corporation	Private corporation.
Sources of funds	Class A stock purchased by Treasury; Class B stock purchased by borrowers; Class C stock purchased by organizations eligible to borrow.	Class B stock purchased by borrowers; Class C stock purchased by organizations eligible to borrow.
Debt/equity ratio	10/1	10/0.
Uses of funds	Direct loans, guarantees	Direct loans, guarantees.
Terms	40 years, 5 year grace period, interest variable	40 years, 5 year grace period, interest variable.
Type of activity	Promote growth of self-help, not-for-profit consumer and producer co-ops.	Promote growth of self-help, not-for-profit producer co-ops.

Regional initiatives

Besides the various national attempts to provide development financing, a number of regional finance corporations have been created. Among the most interesting examples are the Kentucky Highlands Investment Corporation (KHIC) and the Massachusetts Community Development Finance Corporation (CDFC).

Massachusetts Community Development Finance Corporation[11]

The Massachusetts Community Development Finance Corporation (CDFC) is a non-profit organization which invests in job-creating projects (enterprises) sponsored by local community development corporations. It took almost two years of intense study and lobbying to establish the institution. It is a public corporation in that the governor appoints its board of directors: three are state officials, two are experts in finance, three are from community development corporations in target areas and one is from organized labor. However, CDFC is financially independent since it has the power to invest any of its funds held in reserve and borrow money by issuing tax-exempt revenue bonds and notes up to $30 million. The debt/equity ratio is 3/1.

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[11] C. Sussman, *The Massachusetts Community Development Corporation: Legislation and Annotation*, Center for Community Economic Development, Washington, D.C., 1979.

The corporation was initially capitalized when the state purchased $10 million in non-voting common stock by using the proceeds of a state tax-exempt bond issue. The state is responsible for paying the bond premium and principal. This method of initial capitalization has provided $10 million which is currently invested at 16%. The income generated covers administrative overhead and project preparation as well as increasing investable funds.

CDFC has provided $3 million in equity and loans for 17 projects in its portfolio. Its equity participation is limited to 49% of the project's total equity. CDFC cannot contribute more than 10% of its capital plus surplus to any one community development corporation. The local community development corporation must also have an equity stake in the project so that it can exercise some control over it. CDFC recently announced its latest project: the establishment of a plant which prints personalized stationery. CDFC will contribute $50,000 in equity (25% of the common stock) and give a $75,000 loan. The local community development corporation and the local bank will also provide financing.

CDFC has a staff of five professionals (3 MBAs; 2 urban planners) and two secretaries. It takes CDFC approximately nine months to put together a project. Each professional is currently handling three or more projects. CDFC managers feel that six projects would be the maximum load per project officer not only due to lengthy project preparation but also due to time-consuming monitoring procedures such as sitting on the enterprise's board, reviewing monthly financial records, etc. The most serious problem CDFC had in starting up was the lack of good proposals. There was an overestimation of the number of bankable projects. CDCs simply did not have the managerial and technical skills to put together viable enterprises and cheap money does not necessarily make the venture viable. CDFC managers feel that technical assistance is extremely important for the success of the venture. When asked if technical assistance costs didn't weigh heavily on CDFC, the managers replied that they could be included in the loan repayments if necessary. For example, if CDFC spends $10,000 over six months to prepare a project it could then increase the face value of the loan from $250,000 to $260,000 and if the loan is paid back over a long enough period, the early cash flow position of the new business is not jeopardized by the technical assistance costs.

CDFC does have a technical assistance arm, the Community Economic Development Assistance Corporation (CEDAC). However, its existence is precarious since it depends on annual state appropriations. Yearly administrative costs and CEDAC's technical assistance costs are approximately 5% of CDFC's paid-in capital and surplus and 20% of loans and equity outstanding.

Kentucky Highlands Investment Corporation

KHIC is a non-profit community-based venture capital company founded in 1971 and is governed by a 19 member board who represent community and low-income groups. KHIC's capital comes from various grants, principally the Office of Economic Development of the Community Services Administration. Net worth in 1980 was $5.68 million. KHIC operates in a nine-county area of southeastern Kentucky. The population of 180,000 is comprised of poor and unskilled people. KHIC invests in new or expanding manufacturing or production firms using low technology.

Presently, it has 11 business ventures in its portfolio which employ over 400 people. KHIC has invested $3.3 million in debt and equity while outsiders have provided another $6.2 million.[12] A good example of KHIC's financing is Outdoor Venture Corporation, a manufacturer of tents and recreational equipment. In 1972 KHIC purchased a 25% common stock stake for $100,000 and a 6-year 14% subordinated debenture for $20,000. Four years later in 1976 it purchased a $250,000 two-year 11% subordinated debenture and a $130,000 20-year mortgage participation to help OVC with expansion financing.[13] Loans range between $50,000 and $600,000. To make money on its equity investments KHIC would eventually have to sell its equity shares. However, KHIC feels it is under no complusion to dispose of its investments since they are made with a view to a substantial holding period. It may be difficult to find buyers for the stock of small, unknown companies located far from financial centers. KHIC is also required to register its investments under the Securities Act of 1933.

As part of its on-going development activities, KHIC established three subsidiaries. Mountain Ventures, Inc. is a for-profit investment company licensed by the Small Business Administration as a Small Business Investment Company and is owned 91% by KHIC. Kentucky Highlands Real Estate Corporation is also a for-profit real estate development company owned 100% by KHIC. During 1980 KHIC established one more business development arm: New Ventures Capital Corp. Beginning with a capital base of $750,000 it will make smaller less equity-oriented investments than KHIC and will back area residents. KHIC has decided that the best and longest lasting solution to the area's underdevelopment will come from the increased business success of the entrepreneurs of the area and it is New Venture's goal to tap this resource.

According to some the single most crucial element in KHIC's success is the ability to identify and attract good entrepreneurs with sound business plans. KHIC employs Venture Founders, Inc. to locate and screen entrepreneurs and gives the best ones technical assistance in development business plans. KHIC also provides on-the-job training in accounting and record keeping. It reviews monthly financial statements and monitors progress. KHIC has a professional staff of 11.

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[12] Kentucky Highlands Investment Corporation, *Annual Report*, 1980.

[13] B. Daniels and L. Litvak, *Innovations in Development Finance*. The Council of State Planning Agencies, Hall of States, 444 North Capitol St., Washington, D.C., 1979, p. 146.

In evaluating its contribution to area development, KHIC developed a measure which defines "return" as the amount of new tax revenues and welfare savings produced by KHIC investments. This yields an annual return of 18.7% on the public funds invested in KHIC.

Conclusions from domestic programs

The following weaknesses in existing and proposed programs and institutions were evident. First, the fact that some could not make equity investments or give technical assistance limited their effectiveness. Second, when technical assistance was offered it was through a separate institution which created coordination and funding problems. Third, in some instances the institutions overestimated the number of bankable projects and had problems disbursing funds. Fourth, when the institutions had no investable surplus capital, they depend on annual appropriations to cover costs rendering their very existence precarious.

CHAPTER III—INTERNATIONAL INITIATIVES IN DEVELOPMENT FINANCING

The search for possible models of development finance institutions led Indian people almost immediately to the World Bank. While much can be learned from the long (1945-1981) evolutionary history of the World Bank, one must bear in mind that international development banks are very special institutions. Their membership is unique in that it is composed of developed and developing countries. These nations contribute both paid-in and callable capital in the form of "subscriptions" which allows them to vote and receive financial assistance, but the World Bank is under no obligation to pay them dividends. Probably more relevant are the development finance corporations which the World Bank has promoted in Third World countries since 1951.[14] This section will give a brief sketch of the World Bank group and then look at a few development finance corporations in the Third World.

The World Bank Group: Early Years: International Bank of Reconstruction and Development

The common objective of the Group is to help living standards in developing countries by channelling financial resources from developed countries to them. The International Bank for Reconstruction and Development (IBRD) had its origin in the Bretton Woods Conference (1944) which also created the International Monetary Fund. The early emphasis was on post-war reconstruction and not on development. In fact the first four loans were to developed countries. Only after the Marshall Plan was in place did the emphasis shift to development.

Early IBRD loans (1950's-1960's) were mostly for capital infrastructure: ports and power stations, road and railways and telecommunications.[15] Today IBRD finances a wider variety of activities which include education, health and family planning. The terms of IBRD loans are variable: 5-10-15-20 years, a five-year grace period, interest rates which cover IBRD's cost of borrowing and administrative overhead, and limited in size to meet all or part of the foreign exchange requirements of the project. If the loan is made to a non-government enterprise, repayment of the interest and principal must be guaranteed by the borrower's government. Over the years IBRD has been able to increase the impact of its direct loans by co-financing.[16]

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[14] Though these instititutions are conceptually interesting, and Indian development finance corporation would have to function in a totally different environment: More limited land base, varied geography and tribal traditions, and the existence of reservation economies within a larger nation-state economic system.

[15] E. Mason, *The World Bank Since Bretton Woods*, (Brookings Institution: Washington, D.C.), 1973, p. 134.

IBRD's use of funds and its ability to extend long-term loans at reasonable interest rates depend directly on its source of funds. IBRD's original capital ($10 billion) was subscribed by its member countries. Twenty percent was eventually paid-in and eighty percent was callable.[17] However, its lending operations were and are financed primarily by its own borrowings in world capital markets. Bonds and notes floated in these markets are backed by that portion of the callable capital which is really "callable" and convertible.

Gaining access to the U.S. money markets was probably one of the most crucial factors in the IBRD's success. U.S. investors in the late 1940's regarded both foreign investments and the new institution with some suspicion. They wondered if the IBRD would be managed efficiently. As soon as the IBRD installed an experienced management team, it was able to float its first bond issues (1947—$100 million and $250 million).

There was also the problem of gaining access to some sources of long-term capital such as pension, insurance companies' and state savings and loan associations' funds. The early presidents of the World Bank spent a great deal of time convincing states to amend their "Blue-Sky" laws to allow these financial institutions to buy World Bank bonds and notes. (See Glossary.)

Confidence was bolstered by the establishment of a conservative 1/1 debt/equity ratio. Bank borrowings were thus limited to 100% of the unimpaired subscribed capital, reserves and surplus. This was and is a very low gearing ratio which gives the IBRD little leverage. Dependency on world capital markets made the IBRD, according to some critics, an overly conservative institution. To assure repayment of its loans and inspire confidence it developed complex procedural safeguards in the granting of loans, it limited the uses of loans to specific projects with adequate rates of return and it required the modification of the borrowers' national economic policies if necessary.

International Development Association (IDA)

By 1961 many developing countries had reached a point where they could no longer service any additional loans on IBRD's terms. In a sense they were "loaned-up". The International Development Association was established to provide assistance for the same purposes as the IBRD but on softer terms: 50 year loans or credits, 10 year grace period, no interest but an annual service charge of 0.75% on the disbursed portion of each credit. For poor countries with an income per capita of less than $625, credit worthiness determines whether they will receive an IBRD loan or an IDA credit.

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[16] Co-financing refers to any arrangement whereby funds from the World Bank are associated with funds provided by other sources outside the borrowing country in financing of a particular project. Co-financing partners are (a) official sources (government, their agencies), (b) export credit institutions, and (c) private financial institutions. World Bank, "Co-Financing", August 1980. See Appendix II for data on co-financing.

[17] Callable is used in a very special sense. Usually all capital is callable until it is paid-in. In the case of the World Bank capital can only be called in the event the Bank cannot meet its obligations to note and bondholders.

While IDA is considered the soft loan window of the Bank group, it subjects projects to the same rigorous appraisal procedures as the IBRD. IDA is supported by member countries' contributions and transfers of profits from IBRD. It is important to note that while the institutions share most procedures and all staff, there is a clear separation of the hard loan funds from the soft loan funds.

In the opinion of some experts the creation of IDA transformed the World Bank from a banking institution that financed viable projects to a development institution that transfers resources on a large scale on a project basis from developed countries to developing countries.[18] (See Appendix III for the World Bank Financial Record 1971-80).

International Finance Corporation (IFC)

Though it has not been mentioned thus far, IBRD and IDA lend for the most part to national governments or to enterprises whose loans are guaranteed by national governments or to enterprises whose loans are guaranteed by national governments. In 1956 the IFC was established to promote the growth of private productive investment and to assist enterprises which contribute to economic development. Membership in the Bank is a prerequisite for membership in IFC. As in the other institutions funds are contributed by member countries. IFC may also borrow from the World Bank for use in its lending operations so long as the IFC's total borrowings do not exceed four times the unimpaired subscribed capital and surplus (debt/equity ratio=4/1). The IFC, as IDA, is separate legally and financially from the IBRD. The IFC also has its own operating and legal staff but draws upon the Bank for administrative and other services.

Unlike the Bank, IFC makes both loans to and equity investments in private enterprises without government guarantees. This flexibility allows the Corporation to provide financial assistance suited to the needs of each project. Its equity stake is limited to 25% of the project's total equity. IFC never invests alone; it expects to mobilize private capital not replace it. Consequently, total IFC equity and loan capital must be less than 50% of the value of the project. A key operating principle has been the sale of its loan investments to private financial institutions. IFC is able to revolve its funds by such sales.

The Corporation invests in enterprises that can provide an adequate financial return on IFC's investment and an adequate economic return to the borrowing country. IFC loans normally run for a term of 7-12 years. Amortization usually occurs in semi-annual or quarterly payments after a grace period. Interest rates vary but generally equal commercial rates. IFC funds may be used for foreign exchange or local currency expenditures to acquire fixed assets or meet working capital requirements.

The following table gives some idea of the group's annual level of activity. Administrative costs of the World Bank group run between 3-4% of the financial assistance they extend.

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[18] Nason, p. 227.

TABLE 3.—WORLD BANK GROUP ACTIVITIES IN 1980

	Number of projects	Annual loans/equity (billions)	Number professional staff	Administrative cost (millions)	Total subscribed capital accumulated earnings (billions)
IBRD	144	$7.644	2,474	$197.9	$39.950
IDA	103	3.838		140.3	2.893
IFC	55	.681	205	26.4	.447

Source: World Bank, Annual Report, 1980, p. 8 & 194, and International Finance Corporation, Annual Report, 1980, p. 2.

Again it is helpful to summarize those characteristics of the World Bank Group which would be desirable in an American Indian development finance institution. Of the three institutions, the IFC probably is the most relevant model for an institution which would promote Indian business development. The IFC makes equity investments *and* loans to private enterprises which promote economic development and promise an adequate rate of return. It receives contributions from member countries and borrows from the World Bank which borrows on the world capital markets. Its debt/equity ratio is 4/1. The IFC never invests alone and it organizes co-financing. IFC loans are medium-term. Interest rates vary but generally commercial rates are charged.

The project cycle[19]

Contributing to the World Bank's ability to raise funds worldwide is the fact that such funds are always invested in sound projects. Project-lending is the main business of the Bank. Consequently, the Bank has developed over time rigorous and comprehensive procedures for project promotion, development, selection, implementation and evaluation. An analysis of these procedures will indicate the necessary scope of operations for any institution which engages in project financing.

The entire process of project financing starts with *project identification.* Developing countries and Bank staff identify projects which will promote the growth and development of the borrowing country. The Bank assumes an active role in this first stage of the cycle to insure a timely flow of well-prepared projects. Some development experts feel, however, that if the same staff is involved both in project identification and project appraisal, it will tend to lower the quality of their project appraisal. One should remember, however, that the projects are selected by the Executive Directors not by the operations staff.

Three aspects are important in project identification. First the project must be consistent with a coherent development strategy. Second, the project must provide benefits commensurate with the costs. Third, the borrower must be credit-worthy. Only after these three issues have been favorably resolved does the process enter the second stage—*project preparation.*

Formal responsibility for project preparation rests with the borrower. In practice the Bank often helps borrowers to find financing to technical assistance for this preparatory work. Under exceptional circumstances the Bank does preparatory work itself. A project brief is prepared for each project describing the objectives of the project; the special issues involved; the probable timetable; technical, institutional economic and financial conditions necessary for achieving project objectives. Critical to project preparation are feasibility studies which compare the costs and benefits of the alternative technical and institutional designs. Once the Bank is satisfied that the project brief describes a basically sound and worthwhile project the third stage can begin—*project appraisal.*

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[19] W.C. Baum, "The Project Cycle," *Finance & Development*, Dec. 1978.

The project is subject to four different types of appraisal: technical, institutional, economic and financial. The technical appraisal examines project design and engineering, the physical scale, layout, location of facilities, choice of technology, cost estimates and impact on surrounding environment. The institutional appraisal checks the soundness of the organizational structure and the availability of skilled management. The economic analysis calculates the project's rate of return using social cost/benefit analysis. Only projects which have both a satisfactory financial and economic rate of return will be selected. Last is the financial appraisal which builds upon the technical and economic appraisals. A financing plan must be put together since the Bank only covers a part of total project costs. The Bank will try to find others who are interested in co-financing. Projections must be made of balance sheets, income statement and cash flow. The Bank must be certain that revenue will be sufficient to meet debt service payments.

If the project is technically sound, it will produce a reasonable economic rate of return, and a financing plan can be agreed upon, loan documents are drawn up. After this the project proceeds to the last stage—*project implementation.* The borrower bears sole responsibility for implementation which includes setting up the organization, the training of staff and hiring of managers. However, the Bank closely supervises the implementation and often renders or arranges for technical assistance because the benefits of the project can only be realized if the project is properly implemented. The Bank staff makes frequent site visits and reviews reports on project execution, costs and financial status. Once all Bank funds have been completely disbursed, the level of supervision declines and the staff writes a completion report. This report is then passed on to the Operations Evaluation Department which conducts an *ex-post* audit.

Development finance corporations: regional and national

Regional banks are intermediate between global institutions such as the World Bank Group and local institutions such as national development finance corporations (DFCs). The outlook of a regional bank is necessarily regional and it finances projects which might lie beyond the reach of national DFCs such as international natural resource projects.

One motivating factor in the creation of the early regional banks was the feeling of developing countries that the World Bank was overcentralized and did not give them sufficient voice.[20] However, the regional banks adopted the World Bank's procedures and terms of lending.

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[20] H.S. Bloch, "Regional Development Financing," *International Organization*, Vol. XXII, No. 1, 1968, p. 183.
The World Bank has since reorganized its departments along "regional" lines.

The Asian Development Bank (1967) is a partnership of both developed and developing nations and had an initial authorized capital of $1100 million. The African Development Bank (1965) is a coalition of developing countries only and had an initial authorized capital of $250 million.[21] The advantage of these regional banks is by acting jointly developing countries increased the amount of long-term development finance they could obtain beyond what they could have obtained individually.

One of the earliest and most innovative activities of the World Bank was its promotion of *national* development finance corporations. The World Bank could not directly fund small productive enterprises. Therefore, it promoted financial intermediaries through which it could channel funds to small businesses. Since 1951 the World Bank group has contributed $7.3 billion to over 400 development finance corporations (hereafter DFCs).

Currently, the World Bank Group's average annual commitment to DFCs is between $1-1.5 billion which is spread over thirty or so loans, credits and equity contributions. The DFCs have proven to be a highly efficient means of assessing investment needs and of allocating investment resources. The loans to DFCs are the most productive ones in the group's portfolio in terms of the stimulus they give to economic and social development.[22]

The next few pages review some characteristics common to DFCs. These characteristics are demonstrated by development finance corporations in Korea and the Ivory Coast which are discussed in greater detail below.

Before looking at development finance corporations in Korea and the Ivory Coast, it is helpful to review some characteristics common to most DFCs. One could describe a DFC as a vehicle for promotion and capital mobilization for productive enterprises. DFCs finance private, public or mixed productive enterprises. The average asset value of DFCs' clients is between $100,000 and $300,000.

The ownership of DFCs can be private, public or mixed. In some circles there is a selective preference for private corporations since it is believed that a private corporation in certain circumstances will be more fully integrated into the market system and removed from political decision-making while carrying out "public" responsibilities. When World Bank experts were asked what impact ownership has on the corporation's performance they unaminously denied that this was a significant factor. The more important determinant was the presence of a strong management team. A public corporation just as a private corporation needs operating automony and complete freedom in project selection.

The DFCs supply of investable funds can come from either equity contributions or borrowings. Generally DFCs have been launched with funds provided by local governments and international public institutions such as the World Bank. Both have supplied equity and loans. In many cases the government has given low interest long-term loans which are subordinated to other debt. Such loans are sometimes called "quasi-equity." The acquisition of quasi-equity greatly increases the leverage of DFCs. A usual rule of thumb for an initial debt/equity ratio is 3/1—that is the DFC's total borrowings are limited to three times its capital and surplus. As the institution matures and its performance improves, the ratio is relaxed to 4/1 or higher. In a few cases, it has been allowed to go to 10/1, when the DFCs track record and current financial situation is a strong and healthy one; the World Bank would be disinclined to go beyond that, although it is not altogether inconceivable. A 3/1 ratio means there is $3 million in debt and $1 million in equity. If say $1.5 million in quasi-equity is combined with the $1 million equity, debt can increase to $7.5 million and still maintain the 3/1 ratio.

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[21] Bloch, p. 184.

[22] B. Knapp, "National & International Support for Development Banks," in UNIDO, *Development Banking in the 1980's*. United Nations: New York, 1980.

In actual practice new DFCs have found it difficult to borrow in the financial markets. In many developing countries the domestic markets are not well-developed because of low savings rates and lack of savings institutions. In some cases the government completely absorbs whatever credit is available to finance its budget deficits. The ability to borrow in international markets is improved by the DFC's size, the quality of its portfolio and the general creditworthiness of the country.

The local government can do many things which enhance the DFC's ability to borrow. It can guarantee the DFC's debt instruments. It can allow the DFC to issue convertible bonds (the investor converts bonds to stock when it is to his advantage). It can allow the DFC to discount its loans at the Central Bank. If the government encourages the development of local capital markets, a DFC will be able to sell its own shares as well as make sales from its portfolio.

DFCs engage in a wide variety of activities.[23] They make medium and long-term loans and supply venture capital (equity). The DFC's total equity position should not exceed the (equity invested in it). DFCs rarely take a controlling interest in any enterprise—it is usually limited to less than 50%. There are also limits on size of the DFC's total investment (equity + loans) in any one venture.

DFCs also underwrite securities and provide guarantees. DFCs, like the World Bank, engage in project identification, preparation, appraisal, implementation and evaluation. They select projects based on financial and economic criteria—the financial rate of return must be sufficient to generate the cash needed to repay the loans and/or pay dividends. DFCs do not extend loans on terms more favorable than are available elsewhere. Subsidized or cheap credit merely gives the wrong signals. Interest rates are related to the opportunity cost of capital. They must cover the DFC's own cost of borrowing, reinvestment, payment of dividends and a reserve for defaults.

Earnings from equity and loans are essential if the DFC is to survive and grow. It cannot always depend on grants/loans from the

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[23] World Bank, "Development Finance Companies," Sector Policy Paper, April 1976. ———, "Operations Evaluations Report: Development Finance Companies," July 1974.

World Bank or the government. Potential investors look at the DFC's return on net worth when making an investment decision.

The following brief case histories illustrate the foregoing discussion on ownership, sources of funds, and uses of funds as well as survival and growth techniques.

Korean Development Finance Corporation [24]

The Korean Development Finance Corporation (KDFC), created in 1967, is privately owned. Its shareholders include among others the IFC, German Development Corporation, the Bank of Tokyo, the Industrial Bank of Japan, domestic insurance companies, commercial banks, securities companies, private corporations and individuals. The World Bank group has contributed over $281 million in loans and equity. The total value of share capital and reserves is approximately $41 million (1979). With a debt/equity ratio of 9/1, total borrowings are in the neighborhood of $370 million. Total assets are approximately $465 million.

The KDFC invests only in productive, well-managed enterprises in the private sector. It gives high priority to manufacturing and processing activities which are for export or are import-substitutes. It expects a minimum rate of return of 15%. A UNIDO study reports that KDFC rations its credit among projects with the requisite rate of return according to the borrowing firm's credit standing. Such conservative behavior might be justified by the need to build up a sound portfolio and inspire confidence in order to strengthen the revolving character of its funds. Evidently, KDFC's strategy is paying off. In 1979 KDFC made a 20% after-tax profit on its average net worth (share capital plus retained earnings).

It will not assume more than a 25% stake in any enterprise. It usually invests a minimum of $200,000 and a maximum of $2 million. Its nominal interest rates seem high—17-18% (1978)—unless one takes into account the interest rate structure in the country and the current inflation rates, which sometimes exceed 25%. Maturities vary between 8-12 years on local currency loans. It requires collateral for its loans such as the plant and equipment.

KDFC professional staff numbers 96 and administrative expenses were 1% of average total assets (loans and equity investments). The financial expenses were 8.2% of average total assets.

The World Bank Group evaluated ten KDFC projects after its first seven years of operation. The economic rate of return[25] on these projects was 30%. Seven were very successful and three were doing poorly. These had not been properly evaluated and suffered from cost overruns, a fall in prices and difficulties in forecasting market supplies.

Ivory Coast Industrial Development Bank

The Bank was started in 1965. Ownership is mixed, 50% private and 50% government. Among the shareholders are Caisse Centrale de Cooperative Economique, Chase Manhattan Overseas Banking Corporation, Lazard Freres and the IFC. Share capital and reserves amounted to $13.6 million (1979). The debt/equity ratio is 6/1 so total borrowings could reach $84 million. Total assets or loans and equity investments in productive enterprises are $113 million.

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[24] UNIDO, *Financial Resources for Industrial Projects in Developing Countries*, March 1978.

[25] The economic rate of return is the rate of return to the country which includes the financial return to the entrepreneur, foreign exchange savings and employments benefits.

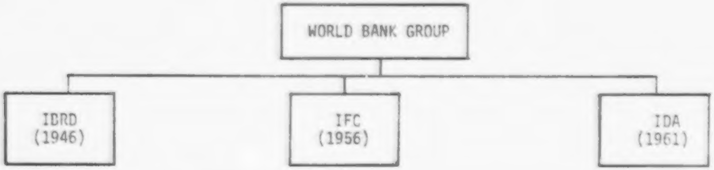
The Bank invests in private industrial enterprises. It takes an equity position as well as placing securities and bonds. Equity is limited to 25%. Its medium-term loans are 7 years and long-term are 10 years or more. Interest rates vary between 9.5–11% (1978). It expects a minimum rate of return of 10%. The Bank also provides technical assistance to establish management structures in small and medium-sized companies. It appoints a representative to the board of directors where it has an equity interest and sends an observer in the case of loans. Between 1965–1967 it had 201 clients or 49% of the total businesses in the Ivory Coast. 232 projects were approved and 29,000 new jobs were created.

In 1979 net profits were 10% of average net worth. It had 32 professional staff members and administrative costs were 2.6% of total assets. Financial expenses were 5.7% of total assets.

Table 4 contrasts the main characteristics of the World Bank group with the DFCs. The World Bank group has access to the international financial markets because its debt instruments are guaranteed by *part* of its callable capital and its portfolio is well-managed. DFCs are largely dependent on the local government and public financial institutions for funds. DFCs are more highly leveraged. DFCs offer a wider range of financial services on terms similar to the IFC. Like the IFC, the DFCs invest directly in productive enterprises though DFCs are able to serve smaller businesses than the IFC.

TABLE 4

Summary Description of the World Bank Group and Development Finance Companies



Legal Status	OWNED BY MEMBER COUNTRIES --		
Sources of Funds	Subscriptions from members Borrowing from capital markets Earnings from portfolio Sales from portfolio	Contributions from members Borrowing from the Bank Earnings from portfolio Sales from portfolio	Contributions from members Transfers of profits from IBRD
Debt/Equity ratio	1/1	4/1	
Uses of Funds	Direct loans to member gov. and national enterprises	Equity investments & direct Loans	Credits to member gov.
Type of Activity	Project finance for infrastructure, health, education, agriculture, industry	Project finance for private Productive enterprises	Project finance for infrastructure health, education, agriculture, industry.
Terms	20 years (max), 5 year grace period Interest rate covers Bank's cost of borrowing plus 0.5% Government guarantee sometimes required	7-12 years commercial interest rates no government guarantee	50 years, 10 year grace no interest 0.75% annual service fee

TABLE 4
(continued)

DFCS

Legal Status	Private, public or mixed
Sources of Funds	Capital from shareholders: private & public Grants from government Quasi-equity from government Loans from public financial institutions Borrowing from capital markets with government incentives: tax exemptions, guarantees Discounting loans at Central Bank Earnings from portfolio Sales from portfolio
Debt/Equity	Ratio 3/1 at start-up; up to 10/1 for mature institution
Type of Activity	Project Finance for Productive Enterprise
Terms	5 - 10 year maturities interest rates are commercial collateral: assets of the business other criteria: creditworthiness of borrower
Uses of Funds	Direct loans Equity investment Loan guarantees Underwriting securities/bonds

CHAPTER IV—PROPOSAL FOR THE AMERICAN INDIAN DEVELOPMENT FINANCE CORPORATION

Section II of this report reviewed the desirable features as well as the deficiencies of existing national programs and institutions in providing capital and technical assistance for Indian business development. To facilitate Indian access to capital it is necessary to create a new special-purpose institution such as an Indian development finance corporation. To be effective it should have the following characteristics:

First, the institution must be able to offer long-term capital in the form of equity investment and direct loans to business enterprises.

Second, the institution must be able to raise its own equity capital as well as debt. Debt can be raised via tax-exempt and/or guaranteed bonds.

Third, during its early years the institution needs to be able to invest its surplus funds in order to generate a stable income.

Fourth, it should be a mixed-ownership federal corporation in order to allow the participation of both government and beneficiaries alike.

Fifth, interest rates should be high enough to cover the institution's costs as well as earn a reasonable rate of return.

Sixth, if the population to be served is dispersed, regional branches should be established.

Sections III and IV examined alternative models of development finance in order to identify essential functions, operating guidelines and organizational structures. This concluding section outlines the purpose, functions and structure of the American Indian Development Finance Corporation (AIDFC). It draws upon the lessons learned from past policies and successful models of development finance reviewed in sections II, III and IV to describe some of the conditions necessary for AIDFC's sucess, the institutional nature of the corporation, sources of funds, uses of funds and operating guidelines.

The creation of such an institution will require legislation in order to overcome the barriers to capital access and capital formation in Indian country. Legislation is also needed to ensure federal participation in AIDFC's initial capitalization and management.

Purpose

The purpose of the American Indian Development Finance Corporation is to promote the economic development of Indian communities by mobilizing both the capital and the technical assistance necessary for Indian business development. It shall also encourage the development of other financial structures which will further facilitate the process of capital formation. The degree of underdevelopment and dependency which characterize Indian communities results from the lack of development of viable, self-sustaining productive activities which could generate income and employment. The American Indian Development Finance Corporation shall provide capital and technical assistance to those profit-seeking enterprises which will have the maximum impact on Indian communities as well as the capability of repaying any financing. The impact of these enterprises shall be measured in terms of their ability to generate income and jobs, to develop Indian resources, to provide needed goods and services and to contribute, in general, to the well-being and stability of the Indian community. Possible examples of profit-seeking enterprises are those exploiting and processing natural resources, those engaging in agricultural activities, those engaging in light manufacturing, and those selling retail and wholesale goods and services. This list is not exhaustive but merely illustrative. AIDFC shall not finance capital infrastructure, health or education but shall facilitate outside assistance if such infrastructure is directly related to and required by the profit-seeking enterprise.[26]

Those eligible to apply for AIDFC assistance are tribal governments, tribal enterprises, tribal community development corporations, Indian co-operatives, Indian sole proprietorships, partnerships and corporations provided they meet the above criteria and the tribal government equity contribution which will be discussed shortly.

Some essential conditions for successful operation

The American Indian Development Finance Corporation must be a *multi-purpose* institution. That is, it must promote, appraise, fund, implement, monitor and provide technical assistance to projects which have the potential to advance Indian business development, financial structuring and capital formation. As section II demonstrated the major cause of the failure to promote Indian business development is the lack of co-ordination of the essential ingredients: long-term capital, working capital, technical assistance and training. The provision of these essential ingredients will be centralized in and co-ordinated by the American Indian Development Finance Corporation. This does not mean that AIDFC will have an exclusive monopoly on these services. Indian tribes and Alaskan natives will still have access to any number of other sources of financing and technical assistance so as not to become too dependent on any one source including AIDFC. Indeed, AIDFC would promote diversification particularly through its co-financing activities (to be described later).

AIDFC must also be an independent institution in which project decisions will be based on objective selection criteria just as in any other financial institution. Since AIDFC must generate income to cover administrative expenses, pay bondholders, increase the supply of investable funds as well as pay stockholders, it must be run efficiently and be free from bureaucratic delays.

AIDFC must have the support of the federal government, Indian tribes and the private business and financial community. The participation of each of these groups is necessary for AIDFC's creation, survival and growth. AIDFC is best viewed as a joint venture in which each partner's participation is essential.

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[26] Capital infrastructure includes roads, water and disposal systems, power and light systems, telecommunication.

Federal participation is crucial not only because of the necessity to provide for the initial capitalization but also to provide for the efficient development of Indian natural and human resources. Since trust assets such as land, timber, water and minerals will be involved in the development of some Indian enterprises, it will be necessary to have close federal cooperation. Some projects will require infrastructure and/or training which only the federal government can provide. Federal participation in AIDFC is entirely consistent with the federal government's role as trustee.

Indian tribes must participate if the institution is to have any credibility since AIDFC's purpose is to promote Indian business development, financial structuring and capital formation. Only their active involvement in ownership and management will ensure that AIDFC functions for the benefit of Indian tribes rather than for its own or another interest group's benefit.

Participation by the non-Indian business and financial community is one way to obtain equity capital, management skills and technical expertise.

One of the most fundamental conditions for AIDFC's success is the ability to raise funds in the capital markets. Initial funding will probably be insufficient for AIDFC's task in the long run. Therefore, AIDFC must have the possibility to raise funds externally as the need arises. These four essential features or conditions shape the recommendations which follow.

Type of institution

In order to allow the participation of the above three groups, the American Indian Development Finance Corporation should be a *mixed ownership federal corporation.* Such a mixed ownership federal corporation would have as its members, the federal government, Indian tribes, and the private sector including non-tribal Indian businesses and individuals, non-Indian businesses, financial institutions and individuals. The members would control AIDFC through its board of directors. The federal government would be entitled to one representative; Indian tribes, six representatives and the private sector, four representatives.

TABLE 5.—AIDFC BOARD OF DIRECTORS

Members	Number of board seats	Term
Federal Government	1	5 years.
Tribes	6	5 years.
Private sector	4	5 years.

Since new legislation is required for this institution, it would be best to create a *tax-exempt* mixed-ownership federal corporation, that is, the earnings or income of AIDFC would be tax-exempt. The tax-exempt status would allow AIDFC to reinvest all net income not paid in dividends in the development of Indian enterprises.

There are precedents for such an income tax-exemption. Among the previously "exempted" organizations are: area redevelopment corporations which provide loans to purchase land and facilities to alleviate unemployment in designated redevelopment areas (Revenue Rule 64-187 CB 1964-1, 187); organizations making loans to induce businesses to locate in an economically depressed area in order to alleviate unemployment (Revenue Rule 67-294 CB 1967-2, 193); Alaskan Native Regional Corporations are exempt for 20 years (Alaskan Native Claims Settlement Act).

Since AIDFC falls within the general category of "public-purpose" development corporations, its income should be eligible for such an exemption. Exemptions could also be granted in the legislation from state taxation which is usually done when the federal government participates in an institution. An income tax exemption could also be extended to the bondholders and stockholders of AIDFC which would make its financial instruments more attractive.

Sources of funds: equity and debt

The American Indian Development Finance Corporation could be capitalized by equity contributions and by borrowing or issuing debt obligations. The survey of national development finance institutions in Section III revealed that an adequate *equity* capital base is crucial for the survival of such an institution in the early years. Equity capital must be reinvested in order to create an income stream which covers administrative expenses, emergencies and project investments. The ability to invest equity capital in financial markets is necessary because project investments will not generate early returns due to grace periods and the inevitable start-up phase.

The amount of financing AIDFC could extend to Indian enterprises is directly related to the amount of its own equity capital. Therefore, the larger its equity base, the more impact it will have on the Indian community.

As DFCs all over the world, a large part of AIDFC's initial equity capital would have to come from the federal government. The equity capital could be in the form of both equity contributions and quasi-equity. Quasi-equity is a long-term, low-interest subordinated loan. It is called "quasi" equity because AIDFC would have the use of the funds over a long period (say 30 years or more) at very low cost (say 5% per annum). Consequently, these funds can be regarded more like equity than debt. Quasi-equity also diminishes the size of the government's permanent stake in AIDFC. There is also the possibility that the federal government's *entire* stake could be in the form of a long-term, low-cost loan. However, this would severely limit AIDFC's equity position, impose the burden of repayment prematurely, and limit the amount of debt AIDFC could raise in capital markets.

Indian tribes and Alaskan natives will be risking their physical and financial resources in AIDFC sponsored projects. Nevertheless, investment bankers and World Bank experts, who were consulted on this proposal, indicated that Indian tribes and Alaskan natives should be willing to contribute to the capitalization of AIDFC. They felt that the federal government and the private sector would be more apt to buy AIDFC stock if tribes and Alaska natives also bought stock.

It is unlikely that AIDFC will be able to rely to a large extent on the private sector for equity capital in the early years. In fact until AIDFC hires a good management team, invests in a number of successful projects—in other words—establishes a track record with a consistent rate of return, the private sector will have little interest in AIDFC's stock since it would have no assurance of capital gains or even dividends.

A possible incentive for the private sector to buy common stock lies in the fact that it allows the private sector to participate on a preferred basis in Indian development projects. Private sector stockholders could be given preference in co-financing and joint venturing to develop Indian projects. Additional incentives could be given by the federal government such as an investment tax credit equal to the value of stock purchased and a tax-exemption on any dividends as previously mentioned.

Method of initial capitalization

This section describes one method to initially capitalize AIDFC. The figures used vastly underestimate the total amount of capital required for Indian business development which has been calculated in a separate background paper.[27] Instead, the figures are related to the amount of equity capital the new corporation could effectively invest in productive projects during its first five-year phase which is limited by absorptive capacity and start-up procedures.

In the first five years it is thought that AIDFC could effectively process at least $10 million worth of projects per year. This would not be the total value of the projects but merely AIDFC's own contribution. This is based upon an estimated 10–15 projects per year. The figure of $10 million was derived from examining the 1979 records of the BIA Revolving Loan Fund.[28] It was found that many loan requests for productive enterprises ranged between $500,000 and $1 million each.

AIDFC's equity capital would come from the sale of common stock. Each share of common stock would have an initial par value of $500. Initially, one million shares would be authorized. In the first five years, approximately 275,000 shares would be issued.

The federal government would be asked to make an equity contribution of $40 million and a long-term loan of $35 million (quasi-equity) which Congress would initially appropriate and distribute over a three-year period. The choice of $100 million federal contribution is related to AIDFC's necessity to be able to invest surplus funds to generate revenue to pay for administrative costs, technical assistance and emergencies as previously discussed. It is also related to AIDFC's ability to efficiently design and initiate 10–15 development projects a year which would entail a capital outlay of $50 million during the first five-year period. The size of AIDFC's absorptive capacity is based on the experiences of other domestic development institutions to find and initiate good, bankable projects in their initial start-up years.[29] In the first year the federal government would contribute $25 million or 100,000 shares at $250 per share on behalf of the approximately 500 existing federally-recognized Indian tribes, state-recognized tribes and Alaskan natives. This would automatically give *each* tribe and Alaskan natives an equity stake of $50,000 or 200 shares of common stock. The federal government would also extend a $35 million loan to AIDFC. The loan would be for 30 years at 5% with a 10-year grace period. In the second and third years, the federal government would make additional equity contributions of $20 million in each year and this would represent *its* equity stake of $40 million or 80,000 shares of common stock.

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[27] See Ron Trosper, "Estimation of Capital Needs for an American Indian Development Finance Corporation." Total capital requirements range from $3 to $8 billion depending on whether the capital/labor or capital/income method is used.

[28] In any case the American Indian Development Corporation proposes to undertake a survey which will identify the actual projects which are bankable and meet the eligibility criteria. Pending completion of the survey, it is estimated that $10,000,000 could be invested by AIDFC per year, since capital requirements range between $3–8 billion.

Each federally- or state-recognized group would be required to match the federal contribution of $50,000. In the case of very small tribes or resource-poor tribes, a special formula based on their actual revenue-generating ability would be devised by the Board of Directors of AIDFC to determine the equitable size of their matching contribution. The rationale for the required match is that each tribe or Alaskan natives will obtain equity in the AIDFC; it will increase its and AIDFC's leveraging potential; and it will allow them to enjoy the privilege of full participation as discussed below.

Those matching the federal contribution would have purchased shares of common stock at $250 per share.[30] While all 500 tribes and Alaskan natives would be common stockholders and entitled to receive dividends, only those tribes and Alaskan natives who matched the initial federal contribution would be entitled to elect the tribal board members and to receive AIDFC assistance. In other words, all 500 Indian tribes and Alaskan natives would participate in AIDFC but only those tribes and Alaskan natives who contributed matching funds would enjoy full participation which includes long-term loans and technical assistance. Those who contributed matching funds would be encouraged to buy additional common stock at $500 per share.

Three tribal board seats would be reserved for those exceeding the initial $50,000 federal match and they would elect these three directors to the AIDFC board. The remaining three tribal representatives would be elected at large by those Indian tribes/Alaskan natives who had matched or partially matched the federal contribution. In any case, each tribe or Alaskan natives would be eligible to vote for only one set of three representatives.

Finally, the private sector would be invited to purchase common stock at $500 per share.[31] However, a ratio of 60/40 would be maintained between the outstanding shares of tribal common stock and private common stock.[32] No individual private shareholder would be allowed to acquire more than 5% of the total outstanding private common stock. Table 6 illustrates one possible outcome of this method of initial capitalization.

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[29] Refer to Mass. CDFC, for example.

[30] While the par value would be $500, Indian tribes and Alaskan corporations could initially buy common stock at below par value during the first five years. The $50,000 contribution by the federal government on behalf of Indian tribes would be sold at $250 to equal 200 shares. Likewise, the matching contribution of $50,000 made by Indian tribes would be sold at $250 to equal 200 shares.

[31] The private sector consists of the non-tribal Indian businesses and individuals, non-Indian businesses, financial institutions and individuals.

At the end of the first year, the government would have no equity position in AIDFC since its contribution would have been transferred to the tribes and Alaskan natives. It would have contributed $35 million in quasi-equity. The tribes and Alaskan natives would have acquired an equity position worth $32.5 million and would own 125,000 shares. The private sector would have an equity position of $7 million and have acquired 14,000 shares (see Table 6).

TABLE 6.—ESTIMATED INITIAL CAPITALIZATION PURCHASE PRICE, SHARES, AND EQUITY VALUE

Equity owner	Purchase price per share	Number shares	Equity value	Percent of initial capitalization
Federal Government:				
Equity	$500	80,000	$40,000,000	
Quasi-equity (30-year loan, 5 percent, 10-year grace period)	0	0	35,000,000	
Total			75,000,000	53
Tribes and Alaskan Natives:				
Federal Government equity contribution for tribes and Alaskan Natives	250	100,000	25,000,000	
Tribal and Alaskan Native match of federal contribution [1] (100 tribes x $50,000)	250	20,000	5,000,000	
Tribal purchase of additional shares [2] (50 tribes x 50,000)	500	5,000	2,500,000	23
Total		125,000	32,500,000	
Private sector:				
Private sector purchase of shares	500	70,000	35,000,000	
Total		70,000	35,000,000	25
Grand totals		275,000	142,500,000	100

[1] This example assumes that 100 of the 500 federally recognized tribes and Alaskan Natives will make the match in the first year.
[2] This example assumes that of the 100 tribes and Alaskan Natives who actually make the match, 50 of them will also buy additional shares.

At the end of the five-year period, the federal government would have contributed $40 million in equity capital and $35 million in quais-equity and have acquired 80,000 shares of common stock. It would also have contributed $25 million in equity on behalf of tribes and Alaskan natives. Indian tribes and Alaskan natives would have an equity stake of $32.5 million and 125,000 shares of common stock. The private sector would have contributed $35 million and have acquired 70,000 shares of common stock or 25% of the total shares held by non-federal participants (see Table 7). During the initial five years, tribes would have the opportunity to purchase common stock at $250 per share up to the $50,000 match. Thereafter, the cost of each share would be $500.

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[32] The federal government is not included in this ratio, but *individual* Indians and Alaskan natives are counted as "private" participants.

TABLE 7.—CAPITALIZATION AT END OF YEAR 5

[Dollars in millions]

Equity owner/year	1		2		3		4		5		Total	
	Equity	Shares	Equity	Shares	Equity	Shares	Equity	Shares	Equity	Shares	Equity	Shares
Federal Government equity			$20	40,000	$20	40,000					$40	$80,000
Quasi-equity	$35	0									35	
Total	35	0	20	40,000	20	40,000					75	80,000
Tribes and Alaskan Natives:												
Federal contribution	25.0	100,000									25.0	100,000
Tribal match	5.0	20,000									5.0	20,000
Additional purchases	2.5	5,000									2.5	5,000
Total	32.5	125,000									32.5	125,000
Private sector equity	7	14,000	7	14,000	7	14,000	$7	14,000	$7	14,000	35	70,000
Total	7	14,000	7	14,000	7	14,000	7	14,000	7	14,000	35	70,000
Grand total	65.5	139,000	27	54,000	27	54,000	7	14,000	7	14,000	142.5	275,000
Cumulative total			92.5	193,000	119.5	247,000	126.5	261,000	133.5	275,000		

This capitalization method assumes that the federal contribution is fixed and is fulfilled at the end of the 3rd year.
This table also assumes tribes make their contribution in the first year only for illustrative purposes. Tribes can make their equity contribution for the life of the institution and would probably do so in reality.
This table also assumes that the Private Sector makes equal equity contributions during the first 5 years for illustrative purposes.

Beginning with the sixth year, Indian tribes and Alaskan natives would pay $500 per share to make their match or to purchase additional shares above the match.

Federal common stock would be non-transferable because the government needs a permanent stake in AIDFC to ensure its legal role as trustee. Tribal and private stockholders who wished to sell their shares would give AIDFC the right of first refusal. Tribal and private stockholders would be able to transfer or sell their stock to similar stockholders, tribal, private to private, and to one another provided the 60/40 ratio of tribal to private and the 5% concentration limit were maintained. Tribes could buy or trade all the private common stock they desired.

Enabling legislation for AIDFC would prohibit the use of proxies by AIDFC stockholders. This would ensure the most active participation of AIDFC stockholders. Similarly, voting trusts would be prohibited to ensure both Indian control and full participation by all stockholders.

Debt

AIDFC's equity capital must be supplemented by borrowing, that is through the sale of such debt instruments as bonds and notes. Again there would be little interest in the financial markets in buying the debt instruments of this new corporation unless the federal government provides specific incentives such as:

(1) guaranteeing AIDFC's bonds, that is backing them with the full faith and credit of the U.S.,

(2) exempting the bondholders' interest-earnings from federal taxation in the same way that interest income from various forms of municipal; and state bonds are now exempt,

(3) allowing federally chartered commercial banks to buy AIDFC's debt instruments,

(4) allowing AIDFC's debt instruments to be used to satisfy federal reserve requirements.

It would also be necessary to obtain state permission to allow financial institutions such as pension funds, insurance companies, state chartered commercial banks and savings and loan associations to buy AIDFC's debt instruments. That is AIDFC must seek on a state-by-state basis an exemption from state "Blue Sky" laws. Without these incentives and exemptions, it is doubtful that AIDFC would be able to market its bonds. If AIDFC could not sell in the financial market, one recourse might be to sell its debt to the Federal Financing Bank as do other federal agencies.

Debt/equity ratio

Initially the debt/equity ratio should be quite conservative, say 3 to 1. The ratio could be relaxed by the board at some future date depending on AIDFC's performance. However, some ceiling should be set in the legislation, possibly 10 to 1.

Given a debt/equity ratio of 3/1, AIDFC's initial capital structure would resemble that contained in Table 8.

TABLE 8.—AIDFC INITIAL DEBT/EQUITY AND CAPITAL STRUCTURE

[In millions of U.S. dollars]

Year 1	Debt (3)	Equity (1)	Source of equity
Version A (quasi-equity is counted as equity)		$32.5	Tribal.
		7.0	Private sector.
		0	Federal Government.
		39.5	
		35.0	Federal Government (quasi-equity).
	$223.5	74.5	Total debt/equity.
Version B (quasi-equity is not counted as equity)		32.5	Tribal.
		7.0	Private sector.
		0	Federal Government.
	118.5	39.5	Total debt/equity.

Source: Table 6 for equity and quasi-equity figures.

After the five year period AIDFC's capital structure might reach the proportions shown in Table 9 below.

TABLE 9.—AIDFC 5 YEAR DEBT/EQUITY AND CAPITAL STRUCTURE

[In millions of U.S. dollars]

Year 5	Debt (3)	Equity (1)	Source of equity
Version A (quasi-equity is counted as equity)		$32.5	Tribal.
		35.0	Private sector.
		40.0	Federal Government.
		107.5	
		35.0	Federal Government (quasi-equity).
	$427.5	142.5	Total debt/equity.

Source: Table 7 for equity and quasi-equity figures.

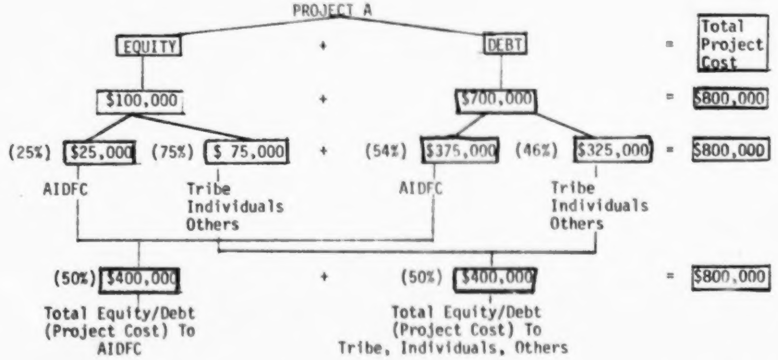
Note.—If the Federal Government's quasi-equity were counted as debt, equity capital would be reduced to $102.5 million and allowable debt to $307.5 million.

Use of funds: financial services

The scope of financial services would be as comprehensive as possible to promote Indian business development, financial structuring and capital formation. As most development finance corporations AIDFC would supply both long-term venture capital in the form of equity and medium-term capital in the form of loans. AIDFC would take an equity position by purchasing preferred or common stock in the Indian enterprise. Whatever AIDFC's equity stake in the Indian enterprise, it should have the option of sitting on the board of directors to ensure proper management. Necessarily, upper limits should be set on the size of the equity position AIDFC takes in any *one* enterprise (say up to 25% of the total equity contribution from all sources); in the share of AIDFC's equity and loans in the total project cost (say up to 50%, see Table 10); in the proportion of AIDFC total funds invested or loaned to any one enterprise (5%). The exact percentages would, of course, be determined on a case-by-case basis. The effect of these limitations on AIDFC's investment strategy is illustrated in Table 11.

TABLE 10

AIDFC/BORROWER EQUITY/DEBT (Project Cost) EXAMPLES


PROJECT A
EQUITY
+
DEBT
=
Total Project Cost
$100,000
+
$700,000
=
$800,000
(25%) $25,000
(75%) $ 75,000
+
(54%) $375,000
(46%) $325,000
=
$800,000
AIDFC
Tribe Individuals Others
AIDFC
Tribe Individuals Others
(50%) $400,000
+
(50%) $400,000
=
$800,000
Total Equity/Debt (Project Cost) To AIDFC
Total Equity/Debt (Project Cost) To Tribe, Individuals, Others

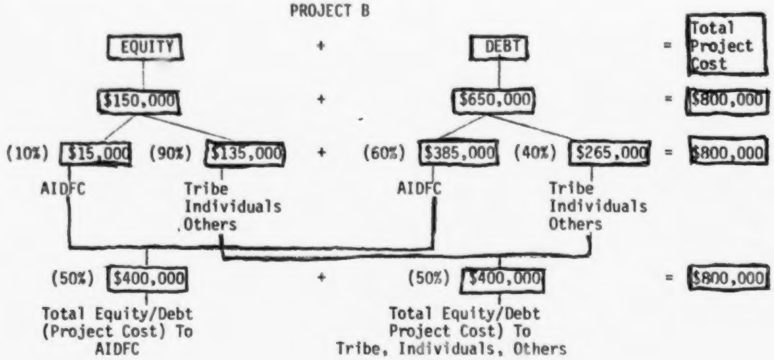

PROJECT B
EQUITY
+
DEBT
=
Total Project Cost
$150,000
+
$650,000
=
$800,000
(10%) $15,000
(90%) $135,000
+
(60%) $385,000
(40%) $265,000
=
$800,000
AIDFC
Tribe Individuals Others
AIDFC
Tribe Individuals Others
(50%) $400,000
+
(50%) $400,000
=
$800,000
Total Equity/Debt (Project Cost) To AIDFC
Total Equity/Debt Project Cost) To Tribe, Individuals, Others

TABLE 11.—AIDFC PROJECT INVESTMENT STRATEGY [1]

[AIDFC total equity plus debt equal $100 million] [2]

	Project A		Project B		Project C	
	Dollars	Percent of total dollars	Dollars	Percent of total dollars	Dollars	Percent of total dollars
AIDFC equity contribution	$1,250,000	25	$2,500,000	25	$2,500,000	17
AIDFC loan	1,250,000	25	2,500,000	25	2,500,000	17
Total AIDFC participation	2,500,000	50	5,000,000	50	5,000,000	34
Borrowers—equity and/or 3 other sources of funds	2,500,000	50	5,000,000	50	10,000,000	66
Total project cost	5,000,000	100	10,000,000	100	15,000,000	100
Percent of AIDFC's total equity and debt invested in any one project		2.5		5		5

[1] Suggested upper limits: AIDFC Equity participation in each project/enterprise may be up to 25 percent of total project cost. AIDFC loan participation in each project/enterprise may be up to 50 percent of total project cost. However, equity and loan participation in each project/enterprise may be up to 50 percent of project's cost. AIDFC equity and loan participation in any one project is limited to 5 percent of AIDFC's total equity and debt.

[2] In Chart 4, AIDFC total equity and debt is assumed to be $100 million for the purposes of simplifying the illustration.

One objective of such an investment strategy is to ensure that AIDFC limits its exposure in any one enterprise. In addition it would be undesirable for AIDFC to assume a dominant position in an Indian enterprise since this would limit participation by others. Besides limiting its exposure in any one project or enterprise, AIDFC's board should decide whether to diversify its investments among different types of projects (i.e., natural resources, agriculture, light manufacturing, commerce) to reduce risk or to specialize in one area initially and expand to others as it gains expertise.

Equity investments are very important to new enterprises because they eliminate the burden of regular interest and principal repayments in cases where cash flow is not yet adequate. AIDFC loans would be subordinate to other debt so enterprises could leverage additional private debt. Maturities for AIDFC loans would vary between short and medium term.

AIDFC's split between equity/loans to enterprises is dictated by the sources of AIDFC's funds. The more equity capital AIDFC has, the larger can be its equity financing to projects. Its ability to extend loans depends directly on its own ability to borrow.

AIDFC's loans would be in the form of lines of credit to Indian clients. As they submit invoices for approved purchases, they would draw down their lines of credit. Procurement procedures would be specified by AIDFC to ensure that the funds achieve maximum impact. AIDFC should take the responsibility for putting together the financial package for the project. AIDFC would encourage commercial banks such as the American Indian National Bank and others to become co-financing partners. AIDFC would give loan guarantees and use linked-deposit strategies to encourage their participation. AIDFC would never invest alone, it expects to mobilize capital not replace it. It would be necessary to charge a fee for all services including guarantees since AIDFC would be a profit-seeking institution.

The fact that AIDFC would supply investment information, a loan guarantee to the co-financing partner and give technical assistance to the project should diminish the traditional reluctance of commercial banks to lend to Indian businesses since such actions reduce risk.

AIDFC could eventually underwrite tribal bonds and stocks or place them directly thus reducing the tribes' cost of SEC registration, under-writing fees and management.

Interest rates should be set at levels which cover AIDFC's cost of borrowing, its administrative costs, reserves for default and reinvestment. AIDFC should not subsidize interest rates since interest subsidies often divert capital to marginal enterprises. Collateral may or may not be required. If good project appraisal techniques are used, the need for collateral diminishes since the real security is the viability of the project itself. Loans and equity investments will be monitored on a monthly basis and follow-up assistance given if the enterprise gets into difficulties. In sum AIDFC will be an investor, lender, packager and broker for Indian enterprises.

Organization structure

Quite naturally the organizational structure of the corporation follows from its purpose and functions. Among the most important entities would be the stockholders, the board of directors and the president. Since AIDFC's work can be divided into at least five different categories it would need at least five departments to handle project development and selection, project evaluation and audit, technical assistance and training, financial operations, and portfolio management. Since Indian people are widely dispersed, AIDFC should be decentralized. The establishment of regional branches would not be a problem since AIDFC would be a corporation and not a bank. These regional offices could be set up after establishment of the central organization.

Stockholders

The stockholders would consist of each of the Indian tribes and Alaskan natives, the federal government and private investors who held equity in AIDFC. They would meet once a year. They would receive the annual report of the corporation and would approve the broad policy recommendations brought before them by the board of directors.

Board of directors

The board would be composed of one federal representative, six tribal representatives, four private sector representatives. The president of AIDFC would be a non-voting member, whose attendance would be at the discretion of the board. The board would meet quarterly.

Board members would be elected to five year terms except in the first round. The federal representative would serve at the pleasure of the President of the U.S. Half of the Indian representatives (3) and private sector representatives (2) would be up for election after the first three years of AIDFC's existence. The remaining half would serve the full five-year term. Election cycle would occur as follows:

TABLE 12.—ELECTION CYCLE

	Years 0	3	5	8	10	13	15
Representatives:							
Tribal							
3 [1]			Elect		Elect		Elect
3 [2]		Elect		Elect		Elect	
Private							
2			Elect		Elect		Elect
2		Elect		Elect		Elect	

[1] Tribes/Alaskan Natives exceeding the Federal match.
[2] Tribes/Alaskan Natives meeting all or part of the Federal match.

As other boards AIDFC's Board of Directors would formulate general policy and evaluate the performance of AIDFC. It would have the following responsibilities:

(1) A more precise formulation of how Indian enterprises could have "maximum impact" on Indian communities.
(2) Setting the debt/equity ratio.
(3) In coordination with stockholders, deciding on the issue of new stock.
(4) Selection of AIDFC's president.
(5) Evaluation of AIDFC's performance.
(6) Preparation of annual reports to the stockholders.
(7) Approval of regional offices.

The President

The chief executive officer of AIDFC would be the president. The president would serve at the discretion of the board of directors. The president would implement the board's decisions and be responsible for the daily operations of the corporation. The president would select the vice-presidents who would, in turn, select their department directors.

As most presidents he/she would organize a top management committee composed of the vice-presidents of the corporation and others. Among the committee's most important functions would be the initial project selection based on recommendations from the project development department. These recommendations would, of course, be based on the project selection criteria designed by the staff and approved by the President. It would be better to have initial project selection in the hands of a committee in order to diminish political pressure on the president and to ensure the proper application of the project selection criteria. The committee could also review and give advice on projects in trouble.

The president would evaluate each department's performance. The president and comptroller would sign the actual loan documents after the project was approved. The president might make certain financial decisions such as when to offer a new bond issue or stock issue or make sales from the corporation's portfolio. The president could also set limits on technical assistance.

Project Development Department

This department would be in charge of project identification, preparation, appraisal and implementation. The World Bank procedures in this regard (See Section IV) would be adapted to the needs of AIDFC. Table 12 summarizes each phase of the project cycle and identifies the responsible party.

Project identification includes identifying potential profit-seeking enterprises. Before this can be done project promotion must be undertaken. Project promotion entails a study of the local economy and a preliminary selection of potential projects based on pre-feasibility studies. This function might be best left outside AIDFC and in the hands of tribal governments and Indian business development organizations (BDOs). This would ensure that AIDFC does not become involved in internal tribal affairs. After examining the pre-feasibility studies, AIDFC could indicate which projects should be subjected to further examination or a full-scale feasibility study. AIDFC could assist the borrowers by providing guidelines and project preparation loans for the feasibility studies. In some cases AIDFC might undertake the feasibility studies itself.

These studies would then form the basis for the next stage—project appraisal (See Table 13). The exact appraisal and selection techniques are the subject of another study and so will not be discussed in detail here. Preference would be given, however, to projects which had the required competent management and sound organizational and financial structures. Part of the project appraisal is a financial appraisal under which a financing plan would be drawn up. This would be negotiated between AIDFC staff and the Indian recipient. The decision to finance the project would be made by the top management committee and approved by the board. Once the project is approved co-financing could be finalized.

TABLE 13

The Project Cycle

	TASK	RESPONSIBLE ENTITY WORLD BANK CASE	RESPONSIBLE ENTITY AIDFC CASE (suggested)
	1. Project Identification (Promotion) . general survey of economic conditions and opportunities . pre-feasibility studies of specific projects	Bank Staff + Borrowers + Others International organizations, UN Development Program	Indian borrowers + BDOs
PROJECT DEVELOPMENT	2. Project Preparation . project brief which describes the objectives, principal issues, timetables, identifies alternatives . feasibility studies which include - technical - institutional - economic - financial aspects	Borrowers have the primary responsibility: Bank staff may provide help and financial assistance thru its Project Preparation Facility (loans)	Indian borrowers + BDOs AIDFC staff may provide guidance and financial assistance in the form of a project preparation loan or AIDFC can do the feasibility study itself
	3. Project Appraisal (Selection) . comprehensive review of the feasibility studies esp. the - technical - institutional - economic - financial aspects	Bank staff + outside consultants	AIDFC staff + outside consultants

4. Project Negotiation		
- amendment of appraisal report	Bank staff + Borrowers	AIDFC staff + Indian Borrowers
- negotiation of loan document	Bank staff + Borrowers	AIDFC staff + Indian Borrowers
- approval and signing of loan document	Executive Directors + Borrowers	Top Management Committee, President & Comptroller for approval
5. Project Implementation	Borrowers implement	Borrowers implement + BOOs
- setting up the organization (if necessary)	Bank staff supervises & monitors	AIDFC staff supervises & monitors
- training staff		
- construction		
- supervision		
- progress reports - gradual disbursement of funds		
6. Project Evaluation (ex-post)	Bank Operations Evaluations Dept.	AIDFC Evaluations Department
- audit & inspection		
- review of completion report		
- field review		
- completion report by borrowers		

Technical assistance and training

If technical assistance and training are necessary to ensure the viability of projects, they should be co-ordinated by a separate department. At least three types of technical assistance can be distinguished:

(1) technical assistance in project preparation, that is in the preparation of feasibility studies,

(2) technical assistance when the project is in trouble and requires remedial action to protect AIDFC's investment,

(3) technical assistance for project implementation, that is training in certain skills necessary to run the enterprise.

Since these activities are very expensive, AIDFC would not be able to undertake all of them, particularly the third. Instead, AIDFC would work together with BDOs and others to provide the technical assistance necessary for project preparation and the training for project implementation. The department would help BDOs and others put together courses on an "as needed" basis. These courses could be organized through business and vocational schools.

The department would also be in charge of helping projects in trouble. Again BDOs or a special consultants' team would be sent to diagnose the problems and recommend remedial action. Such cooperation among AIDFC, BDOs and other would minimize technical assistance costs. AIDFC would, however, have to include its cost of technical assistance in its loans or levy a special service charge.

Project Evaluation and Audit Department

While the project is in the implementation stage, the project development department would monitor monthly financial statements and progress reports. Once the project is operational and all funds disbursed a project completion report would be submitted to the Project Evaluation Department. This department would evaluate ex-post whether the project has achieved its objectives and if not, why. Learning from past failures and successes would be important for AIDFC's survival and growth. This unit would also audit AIDFC activities so the board could assess AIDFC's overall performance.

Comptroller's Department (loan operations)

This department would draw up the loan documents and arrange loan guarantees as well as co-financing when necessary. It would be in charge of disbursements and collections. Indian borrowers would receive lines of credit which could be drawn upon after submittal of invoices for approved expenditures. The Comptroller's Department would control types of expenditures based on procurement regulations. Use of local contractors and supplies would be encouraged so long as they meet specifications on quality and price. The department monitors projects once they are operational by examining financial statements and progress reports. If a project runs into difficulties, the comptroller would alert the technical assistance department.

Treasury Department (portfolio management)

This department ranks in equal importance with the project development department. It would be in charge of sales of AIDFC stocks and bonds, payment of dividends, investment of surplus earnings, purchase of equity in projects, underwriting tribal bonds and securities, and sales from its own equity and loan portfolio.

Surplus funds are extremely important for operations, investment and emergencies. How well this surplus is invested could make or break AIDFC. It is crucial to match the maturities and interest rates of AIDFC's borrowed capital with its loaned capital. One cannot borrow short and lend long. The president of AIDFC will have to be involved as well as the Comptroller's Department in Treasury operations because they are too important to be left to the treasurer alone.

Regional offices

Given the dispersion and diversity of Indian tribes and Alaskan natives and their resource bases, it would be necessary to set up regional offices. The regional offices would be instrumental in fulfilling the tasks of the project cycle. For example, they could encourage tribal governments and BDOs to identify potential projects. Then, they could assist them with the preparation of feasibility studies by arranging project preparation loans with the central office. The regional offices would forward the feasibility studies to the central office for appraisal. Once the project met all the selection criteria, negotiations could begin involving the borrowers, regional and central office staff. The regional offices would also be responsible for mobilizing private local capital to finance the project. Once the president and comptroller signed the loan document, the regional offices would participate in implementation, supervision and monitoring. They could also arrange for training with the central office.

Personnel

Little has been said about the type of employees AIDFC would need. Before describing their skills it is important to state that the corporation should be free of civil service requirements. This would give it the flexibility it needs in hiring and firing. To ensure continuity of operations five-year contracts could be offered after a probationary period except for the president who will serve at the pleasure of the board of directors.

The project development department would need economists and MBAs; project evaluation would need economists, MBAs, CPAs and lawyers as would the comptroller's department. Treasury would need investment bankers, brokers, security analysts. Technical Assistance and Training would need MBAs, CPAs, and educational specialists.

Since salaries constitute 60% of the administrative expenses of many development finance institutions, it would be advisable for AIDFC to hire people with general backgrounds (MBAs, etc.) and hire specialists (engineers, marketing analysts) on an "as needed" basis.

For the top management positions only seasoned executives with experience in investment banking, financial management and economic development should be considered.

OUTLINE OF PURPOSE AND CHARACTERISTICS OF AIDFC

1. *Purpose:* mobilize capital and technical assistance for Indian business development; promote financial structuring and capital formation.

2. *Eligible Borrowers:* tribal governments; tribal community development corporations; tribal enterprises; Indian individuals; Indian proprietorships; Indian partnerships and corporations; Indian co-operatives.

3. *Types of Eligible Activities:* profit-seeking enterprises/projects including those exploiting and processing natural resources, those engaging in agricultural activities, those engaging in light manufacturing, those selling retail and wholesale goods and services.

4. *Type of Institution:* independent federal institution (but free of civil service).

5. *Legal and Tax Status:* mixed-ownership federal corporation (tax-exempt); stockholders—federal government, Indian tribes, private sector.

6. *Source of Funds:*

Equity: federal government; tribes; private sector; (incentives: dividends tax-exempt, purchase of shares receives an investment tax-credit; private sector receives access to information and preference in co-financing and joint venturing).

Quasi-Equity: long-term, low interest loan.

Debt: bonds and other debt instruments (guaranteed by federal government; income on bond is tax-exempt).

Other: sales from portfolio; earnings on portfolio.

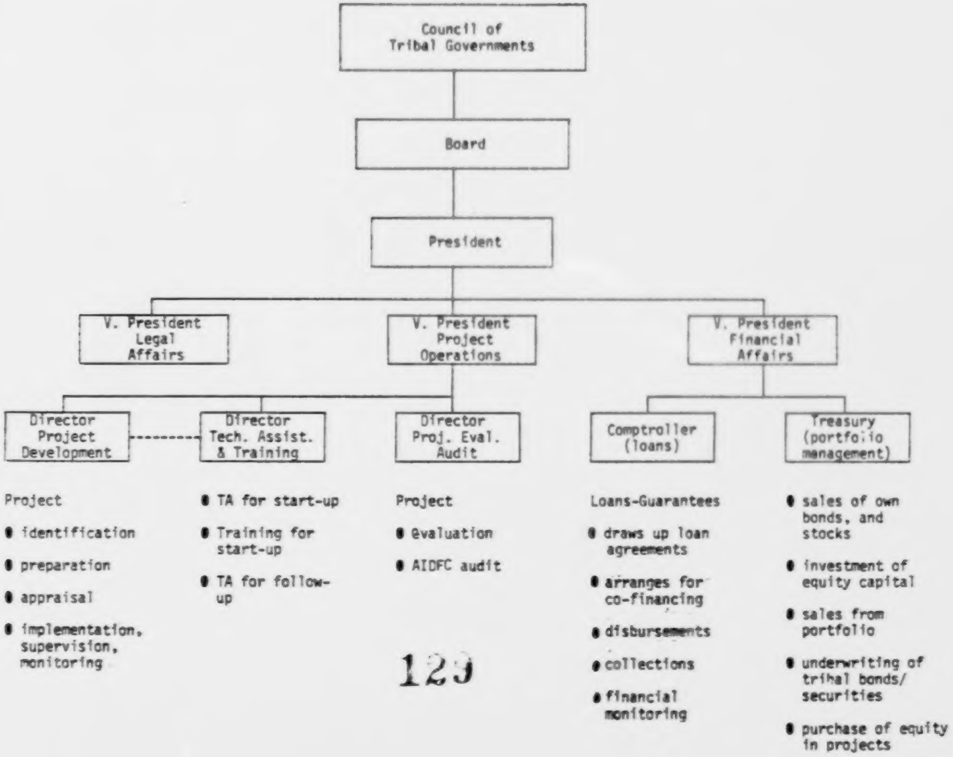
Debt/Equity ratio 3/1 initially; 10/1 maximum.

7. *Uses of Funds and Financial Services: Equity investments* (limited to 25% of total project equity). *Loans* (equity + loans limited to 50% of total project cost). AIDFC's total equity + loans to any one enterprise would be limited to 5% of AIDFC's total equity + borrowing. *Interest rates on loans* (sufficient to cover AIDFC's costs plus earn a reasonable rate of return). *Maturity on loans* (variable).

Other Services: Loan guarantees for co-financiers; financial packaging; underwriting.

8. *Other Functions:* Technical Assistance and Training.

9. *Organizational Structure:* See next page.


Council of Tribal Governments
Board
President
V. President Legal Affairs
V. President Project Operations
V. President Financial Affairs
Director Project Development
Director Tech. Assist. & Training
Director Proj. Eval. Audit
Comptroller (loans)
Treasury (portfolio management)
Project
• identification
• preparation
• appraisal
• implementation, supervision, monitoring
• TA for start-up
• Training for start-up
• TA for follow-up
Project
• Evaluation
• AIDFC audit
Loans-Guarantees
• draws up loan agreements
• arranges for co-financing
• disbursements
• collections
• financial monitoring
• sales of own bonds, and stocks
• investment of equity capital
• sales from portfolio
• underwriting of tribal bonds/securities
• purchase of equity in projects

ABBREVIATIONS

BIA—Bureau of Indian Affairs
EDA—Economic Development Administration
FFB—Federal Financing Bank
GAO—General Accounting Office
IBRD—International Bank for Reconstruction & Development
ICIDB—Ivory Coast Industrial Development Bank
IDA—International Development Association
IFC—International Finance Corporation
KDFC—Korean Development Finance Corporation
KHIC—Kentucky Highlands Investment Corporation
MCDFC—Massachusetts Community Development Finance Corporation
NCCB—National Consumers Cooperative Bank
OMB—Office of Management & Budget
SEC—Securities & Exchange Commission

GLOSSARY [1] OF FINANCIAL TERMS

Advised line of credit

Term for a credit facility confirmed in writing as to the terms and conditions under which the bank is prepared to grant credit. It can be (1) good until cancelled—the bank may terminate the line of credit at will and, prior to such termination, the beneficiary may draw at will; (2) annual review—the line is good for one year during which the beneficiary may draw at will; (3) as offered—the bank must be consulted prior to each drawing.

African Development Bank

Formed in 1964, the ADB had 46 members (as of 31 December 1976), all from Africa. Its functions are to help provide development capital for Africa. The headquarters are at Abidjan Ivory Coast.

Arbitrage

In general buying (or borrowing) in one market and selling (or lending) in another.

Asian Development Bank

Formed in 1966, the ADB had (as of 31 December 1977) 42 members, including the UK, the U.S., and 12 other European countries, in addition to 28 Asian members. Its functions are to help provide development capital for Asia. Its headquarters are in Manila, Philippines.

Blue sky

A U.S. term for state laws (as against federal laws) regulating the issue and sale of securities. They contain provisions designed to protect the public from securities frauds.

Bond

(1) An interest-bearing certificate of debt—a written contract by the issuer to pay the lender a fixed principal amount at a stated future date and a series of interest payments until the bond matures.

(2) Also used to mean a guarantee or indemnity. A "performance bond" is a sum of money payable, usually by a bank, if a contract is not performed.

Brokerage

Commission charged by a broker to clients on whose behalf they have acted.

Callable capital

That part of a "company's capital" which is not yet "paid-up" and on which the company's directors can call for payments to be made.

Certificate of deposit (CD)

A CD is a "negotiable instrument" in "bearer form". It certifies that a sum of money has been deposited with a bank. The crucial factor which distinguishes it from a bank deposit is that it can be re-sold on the "secondary market." Thus, if an investor believes he can spare some funds for six months, he can buy a CD which is due for payment at the end of that time knowing he can re-sell it if he unexpectedly needs the money earlier. The CD market began in 1961 in the U.S. when a true "secondary market" for CD's was set up.

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[1] The glossary was adapted from Julian Walmsley, a *Dictionary of International Finance* (London: Macmellan Press Ltd.), 1979.

Co-financing

Term for financing a country carried out in parallel by institutions such as the World Bank or IMF and commercial banks.

Collateral

A term for securities or other property pledged by a borrower as security for a loan.

Collateralized loan

The term for a loan granted to a customer upon the pledge of: (1) liquid assets; e.g., registered shares or stock, bonds, or (2) illiquid assets (mortgage on a building, etc.). If the borrower is unable to repay, the lender sells the collateral.

Commercial paper

"Promissory Notes" normally having a maximum maturity of 270 days, sold by companies or institutions to raise cash for working capital purposes. In the U.S., commercial paper is a major borrowing instrument for first-class borrowers. It does not require registration with the SEC. A company can sell its commercial paper to dealers, or it may place the paper directly in the hands of investors by using its own network of contracts. The Market has been in existence for many years but grew rapidly in 1965–70 (from $9.3 billion to $40.9 billion) when its growth was checked by the collapse of the Penn Central Railroad, at a time when the latter had large amounts of commercial paper outstanding. The total now stands at around $80 billion.

Credit rating

In general, this term refers to the quality of a borrower's reputation. More specifically, it is used to refer to a systematic evaluation of a borrower's financial condition by an agency which specializes in this function. The two best-known bond rating agencies are the U.S. firms of "Moody's" and "Standard & Poor's."

Credit risk

In general, the risk that a debtor will not repay.

Crowding-out

Term denoting public sector (government) borrowing so large that the private sector is starved of funds. The argument runs: "the public sector is insensitive to the cost of funds, and has unimpeachable creditworthiness, so can easily borrow when the private sector may not be able to afford to." But the public sector may equally be sensitive to the political cost of driving up interest rates, and it expenditure may assist private sector financing by improving corporate cash flows.

Debenture

An acknowledgement of indebtedness. Usually given by an incorporated company, but can be given by anyone. It is usually given under seal, and usually accompanied by a charge on the assets of the borrower. A debenture may be issued in the form of stock by a quoted company on the Stock Exchange.

Debt-service ratio

Payments made by a country to service its foreign debt; i.e., interest payments and repayments of "principal" as a percentage of the country's export earnings. Precise definitions vary. The "debt" usually includes public sector debt and publicly guaranteed debt.

Discount

To purchase or sell a bill, note or other commercial paper after deducting the amount of interest that will accumulate before it matures.

Dividend

Profit paid to its shareholders by a company.

Equity-capital

The portion of a corporation's assets, all or part, that is owned by the holders of common and preferred stock.

Federal Financing Bank

A corporate instrumentality of the U.S. which is subject to the general supervision and direction of the Secretary of the Treasury. It was established by the Federal Financing Act of 1973 to coordinate, reduce the costs of, and efficiently finance federal agency and federally-guaranteed obligations. The FFB is authorized to purchase any obligation which is issued, sold or guaranteed in whole or in part, by a "federal agency"—defined in the Act as any executive department, federal establishment, corporate or other entity established by Congress and at least partially owned by the U.S. Government.

Gearing

A European term for the relationship between equity capital and fixed interest capital. The American term is "leverage." After deducting interest on a debt, profits are available for dividends on the equity. Thus the effect of high gearing is to make it more uncertain that dividends can be paid, but if the debt is financing profitable business, dividends can grow more than proportionately.

Industrial revenue bonds

A term for "revenue bonds" deriving their earnings from an industrial facility.

Leverage

A term for the proportion of debt to equity in a firm's capitalization. After deducting interest on debt, profits are available for dividends on the equity. Thus, the effect of high leverage is to make it more uncertain that dividends can be paid, but if the debt is financing profitable business, dividends may grow more than proportionately.

Liquidity

Generally, the ease with which an asset can be turned into money. The more quickly an asset can be encashed and the smaller the risk of loss in so doing, the greater its liquidity. For example, one could arrange assets in an order which might include cash, Treasury bills, gilt-edged securities, equities, commodities, and property, in descending order of liquidity. In monetary discussions, the term liquidity is often used to refer to the aggregate of money and "near money."

Loan guarantee

The undertaking of responsibility by one for another person's loan or generally to assure that it will be repaid. The original debtor is still liable for payment but, in case of default, the maker of the guarantee can be called upon.

Management fee

A fee charged by a bank for managing a credit or bond issue.

Maturity

When an obligation has been entered into for a specified period of time, it is said to have a maturity of that period; e.g., if a deposit is placed with a bank for an agreed period of three months, it is said to have a maturity of three months. The maturity date of a bond is the final date by which it must be repaid.

Municipal bond

A bond issued by a municipality. The term normally refers to U.S. issues. These fall into two classes: general obligation bonds, backed by the "full faith and credit" (and the taxing power) of the issuer, and "revenue bonds" backed by specific revenues.

Note

(1) A financial instrument consisting of a promise to pay (i.e. a Promissory Note) rather than an order to pay (such as a bill) or a certificate of indebtedness (such as a bond). (2) If a bill of exchange is dishonored by nonpayment or nonacceptance, it may be handed by the holder to a notary to be noted.

Paid-up capital

Part of the subscribed or issued "capital" of a company which has actually been paid for by shareholders. If the total capital authorized by the shareholders exceeds the paid-up capital, the remainder is said to be "uncalled." If there is no uncalled capital, the company's capital is said to be fully paid.

Paper

Generic term for Treasury bills, CD's, government and corporate securities, etc.

Par

Refers to the nominal value of a security. If a share is issued with a face value of 1 pound and is subsequently traded at that price, it is said to stand "at par."

Par bond

A term for a bond selling at par, in line with prevailing new issues or estimated going yield rates.

Primary market

Term referring to securities markets. The primary market is the market for new security issues; e.g., particpants consist of all those to whom newly issued securities are sold. Subsequent transactions in the security are said to take place in the "secondary market."

Prime rate

A term for the rate of interest at which a bank will lend to its most favored or "prime" customers.

Principal

The face amount or par value of a debt, excluding interest or premium.

Private placement—direct placement

A method of borrowing by selling "bonds" or other financial instruments such as shares to a limited group of investors. The distinguishing characteristic of such a sale or placement is that no advertising is undertaken to sell the bonds or shares. The American private placement market is the largest in the world and is an extremely significant source of long-term capital, up to 30 years.

Project finance

Strictly, finance satisfying the following conditions: (1) It is used solely for the purchase of machinery, equipment, and know-how relating to a specific project; (2) Its maturity is related to the ability of the project to generate sufficient cash flow to repay the loan.

Project line

Term for a "line of credit" made available to finance a particular project.

Quasi-equity

A very low-cost loan or a free grant, a long-term loan (30–40 years), subordinated to other debt or to real equity.

Rediscount

The discounting of commercial paper that has previously been discounted.

Refinancing

Floating a new issue of securities to obtain funds to retire existing securities. The object may be to save interest costs, to extend the maturity of the loan, or both.

Reserves

Term covering funds held against possible future contingencies.

Security

(1) Something deposited or given as assurance of the fulfillment of an obligation. (2) Written evidence of ownership, creditorship, especially, a stock certificate.

Securities and Exchange Commission (SEC)

The agency responsible for ensuring that new securities issues comply with certain requirements, and for the proper administering of the securities industry in general.

Senior

A term for debt which ranks ahead of other debts.

Stock

Stocks, preferred or "common," are the units into which a company's equity is divided.

Subordinated

Term which refers to a promise to pay which cannot legally be fulfilled until payments on certain other obligations have been made and any other conditions defined in the "indenture" have been met. These other obligations are said to be senior to the subordinated obligation. For example, in the case of an unsecured bond issued by a bank, repayment may be guaranteed on a subordinated basis, as far as any claim to repayment is subordinated to the claims of the bank's depositors and its secured creditors, but ranks pari passu with other unsecured claims.

Surety bond

A "performance bond" given by a surety company (normally) guaranteeing to a buyer that the seller will perform his duties.

Treasury bill

Treasury Bills entitle the holder to a payment of a fixed amount at a fixed date. They ensure the financing of the government's cash requirements. Offerings are made weekly at the "auction."

Treasury bond

A coupon security of the U.S. Treasury which generally carries a maturity of more than 10 years. There is a statutory limit of 4.25% on the coupon rate of Treasury Bonds, though issues are regularly made at higher coupons under an exemption procedure.

Treasury note

A coupon security issued by the U.S. Treasury with a maturity of not less than one year nor more than 10 years (filling the maturity range between Treasury bills and Treasury bonds). These notes are available in minimum denominations of $1,000 in either bearer or registered form.

Underwriter

(1) In insurance, the employee of a company who is authorized to bind the company in respect of an insurance risk.

(2) A person who, when an issue of securities is being made, agrees with the issuer to buy or find buyers for those securities which are not taken up by the public. Alternatively, he may agree to buy the entire issue in the first instance. It is normal for certain underwriters to act together in a "syndicate", whose membership may be stable over time, or which may vary according to the type of issue involved.

Underwriting fee

A fee payable to the members of the underwriting syndicate of a particular security issue. It is often a percentage of the spread (between the price at which the syndicate buys the securities and the price at which they are resold to the public) which accrues only to members of the syndicate in proportion to the amount of the issue they have underwritten.

Variable-rate CD's

Introduced in the U.S. in 1975, this is a "certificate of deposit" with a normal minimum maturity of 360 days. Its interest rate is pegged by the issuing bank at a specified spread over the bank's current rate on 90-day CD's and is adjusted every 90 days. The device is an attempt to raise longer-term funds for the bank while partially protecting the investor against swings in interest rates.

Venture capital

Money invested for equity in a new company or project. For some reason we apply the term risk capital to all stocks whether new or old companies, but, when the company is new and the risk is decidedly higher, we give it the more glamorous name of venture capital.

GUIDELINES FOR PROJECT EVALUATION ON INDIAN RESERVATIONS, AN APPLICATION OF COST-BENEFIT ANALYSIS AND SOCIAL ACCOUNTING MATRICES

By Ronald L. Trosper

INTRODUCTION

The need to have projects analyzed in a thorough and responsible way on Indian reservations caused this paper to be written. Although many projects succeed in part because of good design, many development projects are hastily put together and fail for reasons that should be foreseen. In addition, some projects which succeed are marginal ones, raising doubt about the wisdom of undertaking them. This paper is intended to aid those who evaluate potential business or economic development projects on Indian reservations. Because such analysis is complicated, it is difficult in one work to cover all of the material which is applicable. Since there are other books and services which describe standard or traditional project analysis, the approach taken here is to show the modifications which can be made in order to apply traditional techniques in the context of Indian reservations. Each of the three sections of the paper deals with issues which make project analysis on reservations different from many other contexts in which investment opportunities are evaluated.

For instance, one obstacle to increases in the material well-being of Indians is uncritical adoption of assumptions about business organization derived from Anglo-American society. Most people trained in standard American colleges and graduate schools need to be aware of some of the possible differences between Indian cultures and other ones. Procedures or practices that seem normal in American culture are not examined as critically as are other issues in courses at such schools. It is of course dangerous to be too dogmatic on this subject; not all Indian communities are the same, just as there is substantial variation within America outside of Indian reservations. The second chapter of this work reviews many of the cultural and institutional conditions which affect projects located in Indian communities. The question of business organization is one of these. Another is the influence of the federal government in the regulation of land use on Indian reservations.

A second major issue is the structure of reservation economies. As a result of the special circumstances of Indian reservations, the sources of income and the structure of production on Indian reservations are often unusual. For instance, there are important transfers of income from the federal government to individual Indians and to tribal governments. Although these transfers are similar to those received by other communities, they are very large in relation to other sources of income. Another special characteristic of

Indian resource development is the presence of non-Indian individuals and corporations in key sectors. Often, non-Indians are in powerful economic positions either because of their own investment or because of leases obtained for the exploitation of Indian-owned resources. As a result, it is important to be able to examine the structure of reservation economies and to be able to understand the relationships between potential new production and current economic structure. One way to do this is to construct a table, called a social accounting matrix, that shows the transactions among the parts of a reservation economy. A social accounting matrix can also be used to examine issues about the distribution of income among tribal members.

A third major issue is the role of government in promoting economic development in Indian communities. The federal government and each tribal government is concerned about the welfare of Indians. The role of the federal government is sometimes ambiguous, since in many situations the federal government has responded to pressures from non-Indians to impede Indian economic development so that others might use the available resources. Tribal government is much more obviously concerned about economic development. Although most communities in the United States consider both social and private aspects of economic development policy, Indian governments are particularly inclined to consider the total impact of new projects upon their communities. Social cost-benefit analysis is well-suited to guiding decisions aimed at obtaining good returns from the investment of limited capital. The nature of social cost-benefit analysis is to attempt to combine the private and the public costs and benefits of a project in judging whether or not a project is a good one. Although the narrowly material focus of cost-benefit analysis must be recognized as a limitation, application of the technique to appropriate situations should aid the selection of good rather than poor projects.

Recognition of the need for such analysis came about during consideration of means of solving the capital shortage problem on Indian reservations. The American Indian Development Corporation was set up to examine the wisdom of creating an American Indian Development Finance Institution. Since such an institution would need to have a system of project evaluation for Indian communities, the American Indian Development Corporation commissioned this manuscript. Although the original motivation for this work would be for use by development finance institution, the results should also be useful to any organization which sets out to promote business enterprise in Indian communities.

The outline of the work is as follows. It has three parts. The first part is the second chapter, which reviews the literature relating to institutional characteristics of Indian communities and Indian reservations which might affect the success or failure of business enterprise. The second part is the third chapter, which introduces the idea of social accounting matrices using a fictional example of a social accounting matrix. Three examples are presented, each of which is a more complicated version of its predecessor. The first is a four by four matrix. The second social accounting matrix is the ten by ten example. The third matrix has twenty sectors which are consistent with the ten sectors of the previous two examples.

The third and longest part consists of chapters 4, 5 and 6. These chapters illustrate social cost-benefit analysis. The fourth chapter presents a fictional example of an agricultural project on a reservation. The project is analyzed from several points of view: (1) the return to capital, (2) a tribal analysis, (3) a federal analysis, and (4) analysis by an Indian development finance institution. Then the impacts of the project upon a reservation economy are illustrated using the ten by ten social accounting matrix from the second chapter. The fifth chapter presents an example of a manufacturing project. Each of the same points of view are presented. The impacts on the reservation economy are calculated using the twenty by twenty social accounting matrix of the third chapter. The sixth chapter analyzes a natural resource project in some of the same ways that the agricultural and manufacturing example were evaluated. It does not compute the impacts of the project using social accounting matrices.

The reader need not read this work from start to finish. Each of the three parts are fairly separate. Even though social accounting matrices (from chapter 3) are used in the final sections of two of the social cost-benefit examples, those sections are independent of the earlier parts of each of those chapters, and can be skipped.

Since this is a long work, some guidance about its purpose and its level of sophistication is needed. The eventual goal is to make this document usable by non-economists. The present version is too complicated in parts of chapters 4 and 5; additional work is needed to separate the difficult sections into an appendix. For this reason, the reader should not feel that he needs to understand all of what follows. In particular, the analysis of the impacts of a project upon a reservation economy through use of the data in a social accounting matrix requires application of some complicated procedures. Readers should not feel that they need to understand the methods used to derive results; rather, the purpose of reporting the results is to show how such an analysis can be used to see what changes might occur on a reservation as a result of a new economic activity. Actual use of the proposed methods of deriving impacts is not well enough explained at the end of chapters 4 and 5 to allow readers without further training to apply the ideas themselves.

Another problem is that discounted cash flow analysis is not presented in detail prior to use of it in social cost-benefit analysis. Readers may wish to refer to textbooks on capital budgeting that explain the principles. Chapter 4 begins with a brief review of the traditional principles of discounted cash flow analysis and the modifications needed for social cost-benefit analysis.

The application of the following types of analysis involve the application of a materialistic value system to evaluation of different options. Materialistic values are only one type of values which can be used for guiding choices among options. Therefore, it is germaine to clarify some of the objections which have been raised to this type of evaluation. There are at least five district value approaches to the evaluation of a person's or a group's options. They are (1) materialistic, (2) libertarian, (3) nationalist or ethnic, (4) traditional, and (5) scientific. A person may be interested in applying several of these simultaneously, and in evaluating tradeoffs among them. It is helpful, however, to consider each of them separately without claiming that one of them is a subset of another.

A materialistic evaluation examines the material products of an action and attempts to value these outputs. Goods and services which are exchanged for money in market places are the primary examples of material products, and the prices of these products are an example of values for them. Other material outputs exist which are not necessarily traded in market places. For instance, some people value a trip to the wilderness, clean air, or a pleasant view. These are often regarded as "public goods" which require some degree of governmental action in order to provide them. These public goods are a *type* of material good, although they are not material in the sense as is a loaf of bread.

A libertarian, or democratic, evaluation examines the consequences of an action upon the individual liberty of people. Many philosophers and social commentators place individual liberty above material possessions. John Rawls' recent book, *A Theory of Justice*, concludes that a just society is one which sets up institutions which maximize the liberty of persons in the society. Any action that increases material well-being at the price of reducing individual liberty is to be rejected. The Constitution of the United States is an attempt at such a society, because the Bill of Rights sets out standards that courts apply for the protection of individual liberty. Some of these standards undoubtedly raise the costs of economic activity, but the cost is seen as acceptable.

Nationalistic goals are those which focus upon the powers of a *group* to control its destiny. If the group controls a nation, then actions which increase the power of the group are nationalistic. If the group is not a nation, but a part of one or more countries, then actions to support the power of that group are often called ethnic. For example, the activities of the French-speaking people in Canada to increase their power within Canada is an ethnic or a nationalistic movement. Similarly, efforts by particular Indian tribes in the United States to increase their control over activities on their reservations or among their members are examples of the application of shared ethnic goals.

Traditional values are most often expressed as religious ones. Those who apply traditional values to activities evaluate the "moral" value of the activity according to some set of values which has been inherited from earlier generations and which establish a system of evaluation based upon tradition.

Finally, scientific values rank activities based primarily upon their contribution to knowledge. Scientists are interested in expanding man's knowledge of the way in which natural and human activities occur. Any increase in knowledge is valuable in and of itself. Knowledge is defined by scientists as theories capable of empirical verification through observation or experiment.

Often these value systems are applied to different types of activities and never come into conflict. But other situations show such conflict. An example of such conflict is the refusal of many tribal governments to cede tribal jurisdiction over civil cases should that be needed to assure non-Indian developers the security they need to operate a business on the reservation. Another example of the conflict occurs in regard to native languages. Since business is conducted in English, a strong incentive exists to learn and use English. Yet many Indians devote resources to using and preserving their native language. Furthermore, many Indian communities value certain lands for religious reasons and are not willing to use the land for commercial purposes. Conflict between environmentalists and developers is usually a conflict among materialistic ends and is not an example of the conflict of religious and materialist value systems.

This work applies the logic of a materialistic set of values. Since enough people value such ends (at least partially), there is need for systematic application of technical tools for increasing material goods. But there is no desire to present the analysis of this work as a universal or generally applicable method of analysis. Readers who are not solely concerned with maximization of material ends will not totally agree with what follows. The author recognizes that other values may predominate in certain cases, making careful calculation of the net social benefit in materialistic terms irrelevant. Although one could attempt to example methods of chosing projects when other types of values are applicable, such a study is beyond the scope of this undertaking. Therefore, this work only considers other values in relation to their effects upon material goals, and this discussion occurs primarily in the next chapter.

CHAPTER I—INSTITUTIONAL ANALYSIS

Social, cultural, and political obstacles to economic development may exist on Indian reservations. This chapter considers some of the major institutional factors which might affect projects. Examination of obstacles to economic development is both dangerous and useful. It is dangerous because obstacles are tricky; some are not obstacles, some are possible benefits, and some are irrelevant. It is useful because institutional factors need to be taken into account. Even if an alleged obstacle can be circumvented, it needs to be understood in order to be avoided.

Unfortunately, it is easy to fall into dogmatism in discussing noneconomic or cultural barriers to economic development. This chapter is not intended to set down hard and fast rules which can be applied to particular circumstances. Rather, the goal is to consider these issues and assess their relative importance. A conflict exists between the general purpose of this book, to provide "guidelines" for project evaluation, and the limited available knowledge about institutional issues. Not much is known about the interaction of market issues and institutional issues in the development of enterprise on Indian reservations. Everyone has favorite opinions about these interactions. Consequently, one purpose of this chapter is to challenge commonly held perceptions. It would be an error to attempt to substitute the author's own pet opinions for others; yet adoption of an entirely neutral position is difficult. Therefore, the text which follows is a critical review of the literature on institutional issues, in which the author does not hide his own conclusions about the right answers. Strongly stated interpretations should challenge the reader to examine the issues and his own preconceptions.

Instead of a set of rules, therefore, this chapter provides a *checklist* of factors to consider in evaluating a proposed project. There are seven general topics. The first is the attitudes of some Indians about the proper exercise of authority within their communities. Based upon the experiences of a few tribes, two common assumptions should be closely examined.

One of these is that Indians should have all the management positions in their enterprises. It may be convenient for non-Indians to manage daily operation in which face to face orders must be given to Indian employees. An Indian would be uncomfortable in that position. Indians could exercise ultimate authority through a board of directors. A second common assumption is that community meetings should be used to achieve consensus on development activities. This method of obtaining agreement is questioned.

The next part deals with generosity. It questions the widely held view that duties to one's friends and relatives inhibits entrepreneurial activity among Indians. Generosity may be a sign of community strength which asserts itself most clearly when a community is poor due to other reasons such as a small land base or discrimination.

The third section deals with a crude model of the welfare system. This view suggests that programs of public assistance discourage development of independent small sources of income. Consequently, to obtain the support of recipients, an economic development policy must offer large improvements which move them out of the welfare system altogether.

The fourth section considers the issue of patron-client political systems. Such systems operate through factions made up of patrons and their clients. Four of the arenas in which patron-client behavior are possible exist in Indian country. Of particular importance are the imbalances in power positions between officials in the BIA, program administrators, and tribal councilmen.

The next section deals with one of the land tenure problems on reservations: the management of tribal trust land held in common. This is a long section because the issue is complex. Many non-Indians, unfortunately, have a tendency to blunder when discussing common property. They immediately recommend a private property system. There are analytical and historical objections to such a recommendation. The analytical objection is that other choices exist besides open-access management and private property management. The historical objection is that the rhetoric of private property often served as a cloak for taking Indian land. This makes Indians suspicious that the rhetoric will again serve the same purpose.

The sixth section lists some of the reasons that the costs of managing and coordinating economic production are perhaps greater for Indian entrepreneurs than for non-Indians. Although some possible sources of high transaction costs are listed, there is no attempt to determine if the real magnitudes are much different from those of non-Indian entrepreneurs.

The seventh and final section examines the assumption that the rate of saving is deficient on Indian reservations. Because there is no data on the issue, one cannot know at this time if low savings rates are a real problem. The section simply assembles the arguments which have been made for and against the assumption and reaches no conclusion.

A. AUTHORITY

This section discusses conflict which arises because of some Indian attitudes toward the exercise of authority and suggests one organizational innovation which may reduce such conflict. It then goes on to examine a second common organizational action which fails to operate effectively in some Indian communities.

In the first case, a reluctance by Indians to give direct orders to each other is an obstacle to be circumvented. In the second, a popular American method of achieving group consensus is itself a possible obstacle which should be used with great caution.

The Anglo-American firm is organized as a hierarchy in which the formal command structure is from the top down. It has been suggested that this undemocratic structure is not acceptable in some Indian communities.

In his book reporting his experiences with the Fox Indians of Iowa, Fredrick Gearing discusses the ways in which one group of Plains Indians deal with authority:

> I had early sensed a certain discomfort among Fox men in positions of apparent authority, i.e., as members of the Fox tribal council. It seemed possible that these, and Fox men generally, were reluctant to move into positions where they seemed to be above their fellows, instructing them or deciding matters for them. . . . In conversation Fox eyes rarely met, and Fox spoke in a low voice. In formal and informal discussions sentiments were expressed with "They say . . . .", not "I believe . . .". And if others disagreed, their expressed sentiments were countered not directly but by cautious implication. Fox avoided appearing to stare at another, say, who passed down the road. Fox stringently avoided open argument or violence with fellow Fox, failing in this only under severe provocation or when they were drunk. Similarly, in their jobs a few Fox were foremen and the like, but not comfortably or very effectively when their crews were made up of other Fox. In those forms of organization where formal positions of leadership were required (as for the Pow-wows), the men who were elevated to these positions typically were able to exercise unusual caution so as not to appear to direct; even so, their lives were difficult.[1]

This description of Fox attitudes toward authority does seem to be a widely shared attitude among Indians, for example, Robert Bigart, another observer, writes,

> Possibly the most distinguishing feature of Indian society is the degree of independence allowed an individual. Among the Sioux, for example, Erikson found that "every educational device was used to develop in the boy a maximum of self confidence, first by maternal generosity and assurance, then by fraternal training" . . . . Spindler and Spindler . . . note that psychological testing results from Indian groups generally indicate strong individual autonomy. Indians seek advice from others but customarily emphasize reaching the actual decision independent of outside pressure. Indian social values prize personal independence over dominance. Only in those few cases where the welfare of others is seriously threatened will Indian society reluctantly condone forcing an adult to take any action.[2]

Consider an Indian community which values circumspection in the way that Gearing and that Bigart suggest. Suppose this community is considering establishing a factory which needs a high degree of coordination among workers. If this coordination is to be accomplished, someone is going to have to tell others what to do on a daily basis. But no member of the community wants to give orders. A conflict between the requirements of the factory and of the community exists. For the factory to operate in the community, something has to change; some innovation in either factory management or tribal values is needed.

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[1] Gearing (1970), pp. 33–39.
[2] Bigart (1972), p. 1181 (citations omitted).

Bigart recommends that factories of this sort change their methods. His suggestion is to move in the direction of worker-management:

> Instead of supervisors making all of the production decisions, the workers could meet and help in the assignment of production quotas; thus the quotas could take into consideration differing individual needs and industriousness. The workers could be kept informed of plant problems and their advice could be solicited on impending decisions. This, combined with encouraging the workers to invest part of their wages in stock in the plant, could contribute toward a situation where supervisors would work with the Indian employees instead of simply giving orders.[3]

These suggestions would only partly solve the problem posed. Worker control of production decisions still requires that the group determine what each Indian is to do; this may be too much exercise of authority over individuals. Bigart and Gearing both suggest that unanimity is required in group decision-making among Indians.

Another possibility is to hire a non-Indian as manager. This non-Indian would coordinate the activities of Indian workers. He would give direct orders to Indians. He might be disliked for doing so, although he would not himself be bothered by giving orders. A number of Indian-owned enterprises have placed non-Indians in the position of manager. General policy is determined by an Indian board of directors while the manager gives direct orders. This may be the innovation which solves the dilemma that no member of the community wants to tell others what to do. A person not understanding the nature of the innovation here might object to apparent non-Indian power over Indians, and suggest that an Indian be trained as manager. This could, however, be a mistake, for an Indian manager would be circumspect about giving orders.

The Arapahoe Ranch of the Wind River Reservation provides an example of the use of a non-Indian manager in a position which Indians would not accept. Loretta Fowler (1973) summarizes her description of the internal organization of the ranch as follows:

> For example, the tribe hires an experienced, university-trained manager and places him under the authority of tribal leaders who make all important policy decisions. The manager is a white man who is not subject to pressure from relatives and tribemen, and thus labor-management problems are minimized without compromising the Arapahoes' hard-won authority over the ranch operation. Furthermore, though maximum efficiency is held secondary to other Arapahoe priorities, as an Indian enterprise, the ranch is able to lease grazing land more cheaply than ranches owned by non-Indians, which helps to compensate

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[3] Bigart (1972), p. 1185.

> for the expense of concessions made to those tribal priorities which detract from the productive capacity of the ranch. This combination of factors operates to make the ranch financially successful despite the lack of rigid adherence to the principles of scientific management. In fact, in the context of Arapahoe control over its operation, the very success of the ranch may serve to encourage a view of the enterprise as a feat independent of non-Indian tutelage and somehow immune to criticism from non-Arapahoes.
>
> . . . the ranch innovation is an outgrowth of how Arapahoes conceive of the kinds of adaptions that are both acceptable to the tribe and capable of improving reservation living conditions to the level felt desirable by the Arapahoe. In this sense, the ranch history can be viewed as a process of adaptation of Arapahoe definitions and strategies of economic development. . . . While the concept of a white manager was initially resisted, gradually such cultural differences came to be exploited in such a way as to aid in the emergence of the ranch as both a financial success and a distinctly Arapahoe accomplishment.[4]

Fowler's article covers the history as well as the organization of the ranch. The Arapahoe Ranch originated as a Bureau of Indian Affairs imposed enterprise. The BIA set it up and exercised firm control over it. Although tribal leadership has opposed the use of federal judgment funds to set up a ranching enterprise in 1940, within ten years the Arapahoes began moves to take over the ranch rather than to eliminate it. Part of the reason for this may have been the political rivalry between the Arapahoe and the Shoshone and the Wind River Reservation. In 1948, the Arapahoe gained control over the ranch.[5]

There are other examples of Indians setting up enterprises with Indian control over general policy and non-Indian control of day to day management. The Elmo Road Corporation of the Flathead Reservation functioned well with such a structure.[6] The tribal farm of the Sisseton-Wahpeton Sioux Tribe began with a non-Indian manager, although they later placed an Indian in that position.[7] Several of the lumber mills on Indian reservations have non-Indian operations managers.

The lesson of this example is that an apparent conflict of values which would seem to *prevent* development of successful enterprise can be circumvented through organizational innovation. Successful Indian enterprises need such innovation so that Indian communities can avoid the apparent paralysis of community activity which develops when a non-Indian organizational structure is imposed. Successful Native innovations may involve the use of features which on first examination seem unworkable. Non-Indian managment seems wrong to those accustomed to too much BIA control over Indian activities. But if the non-Indian manager is carrying out the policies of Indians, then the circumstances are quite different.

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[4] Fowler (1973), pp. 462–464.
[5] Fowler (1973), pp. 450–453.
[6] Moyer (1972), pp. 67–75.
[7] Norton, Easter, and Roe (1980), p. 698.

There is another startling implication of the ways in which some Indians treat authority. Indians may not like to contradict each other openly, particularly not in large public forums. The implication is that community meetings are not a good method of community action. But a common Anglo-American approach to community mobilization is to hold large group discussion.

In his book on the Quechan Indians, Robert Bee argues that meetings encouraged by federal officials served to *increase* rather than decrease community tension through exacerbating conflict among factions.[8] Michael Moyer, in his work with an Indian community in Western Montana, also reports that community meetings failed to be of any help in achieving consensus about what development activities should be undertaken. Members of the community told him not to hold meetings, and he heeded their advice.[9]

In some Indian communities, the activities of non-Indian community organizers or other individuals seeking change in a community's economic life may be ineffective or even harmful. The problem is that the methods used to obtain a community's agreement on a type of development may cause conflict and increase community tension.

Of course, particular economic development or community activities which are not acceptable to a community have little chance of success. But how does one go about obtaining community agreement or consensus? Personal contact or the use of small group meetings might be a way to explain a program or to obtain the opinions of community members in order to assure that the community accepts a new program. There are alternatives to large group meetings or an attempt to obtain support through votes which need only a majority to pass.

Not all Indian communities are hostile to large group meetings to resolve conflicts. Among the Tonawanda Seneca of New York, the traditional Iroquois political structure remains substantially intact. At the community level, the Chief's Council makes all major decisions. Since each chief is elected for life, the chiefs cannot and do not use an electoral campaign to discover the community's opinion. Rather, they use personal contact and community meetings. Members of the community make their opinions known at the meetings, so that the chiefs will know what is felt. In their official roles, each chief is very cautious about voicing a definite opinion at a meeting until an agreement is reached. But others in the community speak out forcefully. A general reluctance to speak up in large meetings as shown among some other tribes does not exist among the Seneca Indians.

Two conclusions can be reached based upon these examples. The first is that an ostensibly bad idea, non-Indian management or coordination of production activities, can be a good idea. The second is that an ostensibly good idea, community group decision-making in formal meetings, can be a bad idea.

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[8] Bee (1981) pp. 108 and 114.

[9] Moyer (1972), pp. 57–59.

Successful pursuit of economic development on Indian reservations will need and will cause innovations in organization. Those who analyze projects will want to collect more examples of good and bad organizational experiences in order to be able to assess the organizational aspect of proposed projects. Those interested in establishing enterprises on Indian reservations should avoid inflexibility based upon preconceived notions about how Indians organize economic behavior and should expect surprising solutions to apparent institutional problems. Given the variety of Indian cultures, answers for one community may not apply to others.

B. KINSHIP AND GENEROSITY

Although generosity exists in all ethnic groups, it is convenient to link together the norm of generosity and the ties of kinship such as those in Native American communities. In considering possible obstacles to economic development, the following question is important: Does the need to be generous inhibit an Indian entrepreneur's ability to accumulate capital?

One can find various answers in books on the economic conditions of Indians. In describing the economy of the Pine Ridge Reservation, Raymond DeMallie observes,

> . . . because of the reality of extended kinship ties, an individual finds that any money which he accumulates is not his own. The moral system of kin relationship demands that an individual share with his relatives or be branded as a sell-out to the White man's way. There is little doubt that this is one contributing factor to the greater relative economic poverty of full-blood households as contrasted with mixed bloods, who have adopted White American economic values.[10]

DeMallie is stating a commonly held view: because of duties to relatives, Indians are unable to accumulate a surplus.

Francis Jennings expresses a related viewpoint in attempting to explain the failure of Indian economies to prosper from trade with Europeans as much as European economies seemed to benefit from trade with Indians during the colonial period. Indians provided furs to Europe, and Europe provided tools and guns to Indians. Jennings asks the question, "Apart from the incessant demographic erosion of disease and war, what traits in Indian culture made the trade itself so deleterious?" His answer is as follows:

> In a sense one can say that the Indian universally failed to acquire capital because they did not want it. Thereby they sacrificed status as well as opulence and incapacitated themselves for assimilation to the dominant European society except as laborers, fighters, or small peddlers. In this respect the cultural values of Europeans proved as unalterable as the Indians'. Despite the loftiest sentiments of morality and religion, Europeans have never been able or willing to devise a secure place in their midst for persons, other than those in holy orders, who care nothing about

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[10] DeMallie (1978), pp. 298-299.

> wealth. Nor have the Americans of European extraction been willing even to leave Indians alone so long as the latter occupied land that could be turned into wealth. Ironically it has been the Indian's egalitarianism and generosity—traits much admired in European culture—that doomed him to the lowest echelon of the European social structure. This is a far cry from the mythical attributes of laziness and shiftlessness. Perhaps there was a certain nobility about this savage after all.[11]

Jennings proposes that egalitarianism and generosity are an explanation for the decline of Indian economies during the colonial period.[12] DeMallie proposes that generosity explains the relative poverty of fullblood compared to mixed blood Oglala Sioux.

These assertions appear persuasive for several reasons. The logic appears unassailable: what could be more natural than the fact that claims by one's kin, or an egalitarian ethic, prevents the accumulation of capital? After all, isn't saving and the desire to save the main reason for the economic growth of Europe in the modern period? The facts also appear consistent. Indians readily admit to being generous. Indians are poor. It seems to follow easily that the admirable trait of generosity has caused poverty. One can be pro-Indian and hold this view.

So, on one hand the logic is appealing. Generosity certainly would harm saving, and saving certainly is the cause of economic growth. Indians, therefore, have failed to have economic development because they have failed to accumulate capital. And, as we extend the lessons to project evaluation, we must examine the effect of low savings rates upon the success of a project. The dangers might be that a community would consume the capital borrowed from a development finance institution, rather than preserve and expand the capital.

But the logic can be attacked and the facts are not consistent with the hypothesis. Generosity exists among Indians, and certain types of capital accumulation may be unfeasible in Indian communities because of egalitarianism and generosity. It does not follow, however, that capital accumulation is not possible, or that capital will be dissipated by all Indian communities. One needs to examine other aspects of a project to determine if generosity is a problem.

This belief that Indians are generous has a reciprocal belief (among Whites) that Indians exploit one another through the sharing ethic. Indians, in response, criticize Whites for stinginess and greed; Indian poverty is due to such greed in the form of taking land. Both Indians and Whites have what Braroe (1975) calls a "moral universe" which explains daily affairs in a community on or near a reservation. Members on each side interpret events in a way that praises their behavior and their values. Therefore, arguments about Indian generosity and White greed cannot be purely academic. One must recognize the social role played by these theories. It is important to examine Indian-White relations on and near reservations from Braroe's point of view to see what lessons are available to assist in project analysis. It is important not to forget, however, that many people's acceptance or rejection of the theory may have little to do with either logic or evidence, but may be based upon the use of the theory to validate or invalidate day to day contacts between Indians and Whites.

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[11] Jennings (1976), pp. 102-104.

[12] Jennings points out that the joint-stock company and the bureaucratic modern firm are methods of accumulating capital. For him, the joint-stock company is the consequence of acquisitive values. It might be a force of its own, however. Another hypothesis would be that the corporation is a method of imposing capital accumulation upon society; and that without it the accumulation present today in capitalistic societies would be much less. See Marglin (1973).

The theory can be attacked with the following question: if it is important to be generous, isn't it also important to be *able* to be generous? Surely a person with a large surplus of commodities is more able to be generous than a person with less? A selfish person certainly would cease accumulating capital if he had to share the profit. But a generous person would be happy to share the profit, and therefore would be motivated to increase the available surplus. In addition, he would be able to explain to his relatives that the invested portion of the surplus this year would enable him to be more generous next year. If his prediction is true, then his relations will not criticize him for saving. They will benefit from the surplus, and he will benefit from their appreciation of his ability to produce.

The argument can be attacked from another direction. If a person is generous in sharing his surplus, can he not also expect generosity in return? If so, perhaps the kinship group would be particularly effective in mobilizing its resources for economic activity under the leadership of a member of the extended family. If the social return is to be shared, perhaps the investment can also be shared.

Both of these arguments against the "generosity" theory of poverty are not new. A.O. Hirschman used them in reviewing a similar literature that asserts that traditional kinship ties in all non-European societies inhibits capital accumulation.[13] Hirschman cites evidence that families help as often as they hurt capital accumulation.

Even though there is no general reason to suppose that generosity is a barrier to economic growth wherever it occurs, one still cannot dismiss the possibility that it is a barrier in certain circumstances. Consider the small band of Cree Indians described by Braroe in his book, *Indian and White*. They are a "fullblood" community in a marginal economic position as laborers for a prosperous ranching economy. They are "typical fullbloods" for many reasons: they are generous, they practice the Sun Dance, they retain their traditional naming system, they do not intermarry with Whites, and so on. Are they poor because they are generous among themselves? It is hard to say yes, since they have many *other* possible reasons for being poor. They are nontreaty Indians with very little land. The Canadian Indian Affairs Bureau has done little to help them. They speak English poorly and have little access to key information and education needed to work in the surrounding community, which is also made up of ranchers who appear to discriminate against the Indians in many ways. They are in a position of very little economic or political power.

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[13] Hirschman (1971), p. 314.

Suppose, therefore, that one were to imagine this community applying for assistance in the form of a proposed enterprise. What would be the institutional problems with such an enterprise, assuming that it is favorable project when standard social cost-benefit analysis is applied? Would generosity be one of the main problems? Probably not. "Anglo" cultural assumptions direct one's attention to the potential difficulties caused by generosity. The fear is that the "exploitation" of frugal Indians by their kin will inhibit saving and economic growth. This fear itself diverts attention away from other tangible issues such as powerlessness and discrimination. This tendency is reinforced by the fact that the generosity ethic is more important, the poorer and weaker is a community. This makes it more visible and available to divert attention from other factors.

The direction of causality proposed by DeMallie, that generosity causes poverty, should be reversed. Poverty strengthens generosity. A consequence for projects is that success probably depends more on overcoming obstacles *other than* a generosity ethic. But the absence of selfishness should also be taken into account in facilitating the operation of a new economic activity.

C. THE WELFARE SYSTEM

Many Indians receive welfare payments from the federal government and from local governments. This suggests that institutional aspects of "welfare dependency" needs to be examined for obstacles to project development. Eligibility to receive welfare depends upon need in most welfare systems in the United States. Need follows from physical infirmity, lack of work, being unable to work, having to raise young children, or even lack of wealth. One can summarize many eligibility requirements as "asset tests;" in order to receive welfare, one must own assets whose value is below some limit. Therefore, if one has some assets, there is a temptation to use up the assets in order to become eligible. Hence, saving is discouraged and dissaving is encouraged. Perhaps as a result of this reasoning, many societies create counter incentives. In America particularly, society discourages welfare recipiency by stigmatizing the welfare recipient. Since the recipient is unworthy of protection, the welfare agency is given great power over the personal affairs of the recipient and his family. From this powerless position, the recipient must accept whatever interference the government agencies undertake. Consequently, most welfare recipients would rather not be on welfare; but they have no better option.[14]

What is the consequence of this welfare model for projects? People on welfare find little benefit to having just enough income to become ineligible for welfare. One must have a program that moves people well above the welfare system. If the prospect is that the increase in income is small, it would be reasonable for the welfare recipients to regard the program with suspicion and to offer little cooperation. The reasonable welfare recipient should require that programs to help him out of welfare should offer a realistic chance of success. Success should be defined as a secure life well above the welfare eligibility level.

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[14] This theory is illustrated by the Reagan administration's approach to reducing welfare expenditures. The eligibility of the working poor, those with enough skill to find a job, is reduced, while a "safety net" is supposed to remain in place for those without income. Consequently, many of the working poor have to reconsider their decision to work. Since working causes a reduction of welfare, some economists have pointed out that the working poor have large "effective" taxes on their wage income.

One can imagine ingredients of an unwise program. It gives welfare recipients enough wealth or income to remove them from the welfare rolls, but then fails, putting them back on. The net effect on their income over a period may be negative if welfare eligibility is difficult to obtain for a period after it is lost.

Further, failure will be used to justify permanent stigmatization of an individual or a community as permanent welfare recipients. Thus, some observers suspect that those who run welfare programs discourage successful escape from welfare by their clients. This has been said of the BIA, certainly, and also of other welfare programs.

The incentives of such a system discourage accumulation of assets, since asset ownership reduces welfare eligibility. These incentives also discourage work, since the loss of welfare acts as a tax on work. Since the economic incentives of welfare are anti-work and anti-saving, society offers non-economic mechanisms to keep the welfare rolls small, and to get people back to work. *If* this model applies to Indian reservations, it may provide some insight into Indians' response to programs which ostensibly benefit them.

A reservation that is tightly in the grip of a welfare situation may require many related projects in order to move the population far away from the welfare margin. The danger of failure may make the people of the reservation uninterested in projects which have prospects for only marginal returns.

D. PATRON-CLIENT POLITICS

Robert McLaughlin suggests that patron-client political systems in Indian communities may present obstacles to the success of projects and to economic development generally. Since the potential for patron-client relations is great on Indian reservations, this source of problems could be important. On the other hand, strong patron-client ties may themselves not be an obstacle. The problems may arise from the goals pursued by patrons, which are partly determined by structural factors on reservations. For instance, some tribal leaders at present may pursue grants or contracts with the federal government as a means to provide jobs for their friends. The work done with the grant may or may not be beneficial to the whole community. This behavior can be criticized; but the cause of the problem may not be the close ties between a patron and his clients; it may lie instead with the federal policy of self-determination through contracting. With a different set of choices, patrons and their clients might pursue other more productive goals.

A "patron-client system" is a political or social institution which is characterized by many patron-client relationships. A "patron-client relationship" has the following characteristics. First, it is a direct, personal tie between two persons. Second, there is a difference in the relative power positions of the two; the patron is the person with the greater power. Third, there is an exchange between the two persons. Usually, the patron provides material goods or income to the client, while the client provides support (such as in an electoral system) or gratitude. Fourth, the relationship persists over time; as a result, each person builds up expectations about the behavior of the other, and these expectations can become duties. These four characteristics are all needed for a relationship to be described as a "patron-client" relationship.[15]

Four possible areas of the development of patron-client systems are: electoral politics, colonial situations, welfare delivery, and bureaucracies. The *potential* for development of patron-clientism exists in each of these arenas. Whether or not such a system develops depends on circumstances and upon the choices made by potential patrons and clients.

For instance, in a patron-client electoral system, support for particular leaders is based upon the delivery of goods or income directly to clients by the patrons. Leaders who successfully gain office provide jobs to their followers. Each politician will be identified with a faction. The supporters of such politicians have patron-client relationships with him. They may also have kinship or other relationships with him which reinforce the personal nature of the patron-client tie. His success in an election is expected to be followed by provision of patronage to his clients. The patronage usually takes the form of government jobs, but it may also be delivery of government services. Some non-anglo ethnic groups in American cities constructed political machines using patron-client ties. There is a considerable literature describing the operation of these systems. The anglo value involves an appeal to the idea of "common good." Politicians are supposed to support policies that have their effect in an impersonal rather than a personal way. Therefore, the "boss" system of city management is often criticized for using improper techniques. It is too personal. But many do recognize that effective practitioners of this method do provide a way to effectively run a city.[16]

A patron-client system can develop in colonial situations because of the differential power relations between the external colonial power and the domestic political leaders. Although they cannot be independent, by cooperating with the colonial authorities, local politicians can obtain needed results from the colonial patrons. A network of patron-client relations can develop. The distinguishing feature of colonial power relations is that the clients have less power relative to the patrons than in electoral systems. The patron needs votes in electoral systems; therefore, the redistributive nature of the electoral system is probably greater than the colonial one. Elections force patrons to compete and to deliver to potential clients.

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[15] The book, *Friends, Followers, and Factions: A Reader in Political Clientelism* (Schmidt, Guasti, Lande, and Scott, 1977), provides a useful collection of theory and case studies on patron-clientelism.

[16] A distinction must be made. A party organization which supports candidates and delivers votes for them may also deliver services and jobs to its members when its candidates win elections. If personal loyalties are much less important than loyalty to the party as an institution, then an electoral system made up of one or more such parties is not a patron-client electoral system. Politicians in electoral system can obtain support other ways. In presidential elections, television advertising is a way in which candidates appeal to voters, by describing the policies which they will follow. President Reagan promised a tax cut, and delivered. The tie between him and his supporters in regards to that goal was not the tie of a patron to his client.

A welfare system could become a patron-client system if patron-client relations develop between social workers or program administrators and clients. The welfare recipients are potential "clients" and the welfare workers, representing society, are potential "patrons."

Patron-client relations can also occur in bureaucracies. "Old boy networks," if they are characterized by patron-client ties, can develop into patron-client systems. The patrons are the higher-level bureaucrats who provide good jobs and other benefits to their clients. In return, the bureaucratic patrons obtain loyalty from their followers. A system of competing groups can develop, in which the various patrons maneuver for advantage in the bureaucratic heirarchy. The existence of regional offices of relatively equal power in a bureaucracy, as in the BIA, probably encourages such factional development.

In Indian affairs, all four of these arenas exist for the development of patron-client systems. In the welfare system, we have delivery of services, directly to clients, through AFDC, food stamps, BIA programs, and the other locally-based forms of assistances. Being personal and regulated by eligibility rules, these welfare programs are not as susceptible to patronage as the program assistance, such as EDA grants, HUD housing, and other community service subsidies. The local offices of such programs can each become the basis of action for patrons operating within the tribal community. Followers of these patrons would obtain jobs administering the programs and receiving benefits from the programs. The programs at the federal level are supposed to operate through objective rules to be followed in the allocation of benefits; if these rules prevail, this type of welfare patronage may not develop. Patron-clients ties may dominate, however. Perhaps on some reservations intense competition rather than cooperation has developed among local program officers, and other political leaders have not been able to counteract the unfortunate factional conflict with results.

Within the federal delivery system, the local head of a program can become a client of a member of the federal agency which supports the program. Thus, in relation to his clients, the reservation program manager is a patron; in relation to the federal bureaucracy, he is a client. To the extent that federal money is distributed based upon personal connections rather than objective criteria, the potential for patron-client ties are greater.

Thus, the welfare system as a source of patron-client relationships could be important on Indian reservations. Another source is the asymmetric power structure of a "colonial" situation. For instance, the Bureau of Indian Affairs exercises the Interior Secretary's trust responsibility over individually and tribally held trust land. Both of these offer the potential for the local superintendent to develop a set of patron-client ties.[17]

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[17] I recall being surprised upon hearing some older Indians on my reservation speak of certain Indian agents with fondness. They recalled obtaining per capita payments and other assist-

Continued

Regarding the management of tribal land, the relationships among superintendents, elected tribal officials, and tribal members is potentially much more complex than that between agents and allottees. Part of the relationship stems from colonial powers held by the local superintendent. The concept of "trust tribal land" dates from the Collier era, which also was the origin of the Indian Reorganization Act. Elected tribal councils obtain some influence over the use of tribal land. But they usually must obtain the approval of the local BIA office for their actions. Perhaps in some circumstances the local superintendent can become a patron of particular politicians, allowing them to provide support for their clients while obtaining cooperation in return. Such tribal councilmen would become patrons of their faction, and clients of the superintendent. The structural basis exists for such a pattern. Perhaps some of the complaints about IRA governments is evidence that just such systems have developed on some reservations.

Gary Anders (1980) points out that the colonial context and the welfare system together "has, over time, given rise to a structure of dependency through the formation of a comprador Indian elite and . . . these groups now condition the development alternatives open to the tribes." In one case, a "small ruling class has been able to effectively gain control over the tribe's resource base and transform the formerly self-sufficient . . . tribal economy into one which is completely oriented towards using the existence of Indian poverty as a means of securing lucrative government anti-poverty grants that eventually wind up in the hands of the local white contractors, merchants, and businessmen." Consequently, types of change that appear to challenge the ruling elite are opposed by them.

It is quite believable that everyone on a reservation might come to believe that only patron-client clusters can obtain any benefits, either on a reservation or within the Bureau of Indian Affairs. Indians and federal officials would come to share a similar political culture, in which reward is associated with successful action as a patron in serving followers, or as a follower giving support and loyalty to a patron. An electorally-based patron-client system can develop without cooperation from or manipulation by the local agent. A ruling coalition of tribal politicians could support their followers by opposing rather than by cooperating with the local superintendent. Individuals may find themselves as patrons in certain contexts and clients in others.

Is pervasiveness of patron-clientelism a good or a bad thing? Although some may unequivocally say, "It's bad," there is reason to equivocate. For the people concerned, is there a better alternative? One would rather have some friends and supporters than none. Certainly the level of uncertainty in Indian affairs is high. One does not know how long a program will last. Things are done arbi-

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ance from agents active during the application of the allotment policy. How strange that the administrators of allotment would be recalled warmly! This could be the residue of a patron-client relationship; since the Indian agent had been in a very superior power position, it may have been reasonable for allottees to treat him as a fatherly "patron" rather than as an antagonistic "agent." It would be easier also for the agent to regard himself in a paternal rather than an exploitative position. Thus the Indian would obtain slightly better decisions than could be obtained by outright opposition. I also recall that several of the older superintendents I have met seem to be friendly, open, grandfatherly types—hardly the ogres one might think from the popular view of the BIA. This is consistent with their operating as "patrons" on a reservation.

trarily. To the extent that there are objective standards, they are inconsistent. Further, they are seldom followed. Perhaps this is overstating the situation, but many might agree that uncertainty is pervasive in Indian affairs. In such an environment, individuals need allies that will provide long term cooperation *whatever* the particular circumstances. The trust that is built up among a faction and its leader may be one of the few sources of certainty and effective action in an otherwise thoroughly unpredictable situation.

What, then, is the implication of patron-clientelism for productive projects? Must patron-client relations be attacked and transformed, or can they be used to enhance the success of projects?

One argument against the value of patron-client ties in projects goes as follows. Patrons such as tribal councilmen or federal officials must provide *jobs* to their clients. Therefore, any project will be forced to employ as many people as possible, and probably more people than can be employed and still make a profit. The rule is "Maximize the number of jobs!" This objective can be found in 25 CFR § 80.8, in the regulations for Indian business development, as follows:

> *§ 80.8 Priority Criteria*
>
> The following priority will be used in selecting economic enterprises for grant funding:
>
> (a) *First priority.* First priority will be given to economic enterprises located on a reservation that will:
>
> (1) Utilize Indian resources, both natural and human.
>
> (2) Create the highest ratio of Indian jobs to the total amount of dollars to be invested, including market value of materials and equipment contributed to the project.
>
> (3) Create the highest ratio of income to a tribe or its members in relation to the total amount of dollars to be invested, including market value of materials and equipment contributed to the project.
>
> (4) Generate the most non-Bureau financing.

The shortsightedness of the regulation is part of the problem. The BIA says it judges a project on the "number of jobs provided." Over what time period? Are these one-year, two-year or ten-year jobs? Given the uncertainty which affects patron-client systems, a patron perhaps has fulfilled his obligation when he provides a job in an unprofitable project. But would he not obtain even more support if he provides permanent employment? Perhaps the bureaucrat, looking to prove success during a particular fiscal year, would rank permanent and temporary jobs provided as equal. But a tribal politician might be aided by the provision of permanent jobs in a profitable enterprise rather than temporary jobs in an unprofitable one.

On a reservation with substantial unemployment, there is no necessary inconsistency between patron-client goals and the goals of social profitability. Perhaps the strategy for a Development Finance Institution would be to develop criteria which distinguish projects according to the extent to which they operate to transform a patron-client system from a short-term to a long-term attitude. There are other valuable things for patrons to deliver to tribal members besides jobs: protection of land, control over the education of children, and the independence of tribal government for federal pressure and control.

E. COMMON PROPERTY

Land tenure is one of the most complicated institutional issues affecting economic development on Indian reservations. In spite of this, there are very few studies of the impact of land tenure systems on economic activity at the present time on reservations.[18] Some major issues have been identified: fractionated heirship on allotted reservations, extensive leasing of both tribal and allotted land to non-Indians, overgrazing and other types of overuse on land with open access, and access to water.

Although a full treatment of obstacles to development eminating from land tenure questions would be useful, such a large study is not appropriate in this work. But the topic cannot be ignored. This section deals with one of the most important land tenure issues: The practice of offering Indians a choice between one of two unacceptable options, private property or open-access management. Many of the present land tenure problems on reservations result from attempted or successful imposition of one or the other of these two systems. The obstacle here is conceptual. Alternatives to these two options need to be developed or recognized. This section only explains the objections to these options. It does not investigate alternatives.

Open-access management of a resource gives everyone free and unrestricted access to it. Private property management of a resource divides it up and gives owners private and exclusive use of their share. Until recently, these have been the only two methods of managing land in the United States. And at a conceptual level, these are the only two methods that can be imagined by most Americans.

The objection to open-access management is that it leads to excessive use and even destruction of a resource. An examination of American history suggests that many resources in the United States have been destroyed through overhunting: coastal fishing grounds, the buffalo, the passenger pigeon are all examples. Most state governments have instituted some methods of control which limit free and open access to fish and wildlife by hunters in order to forestall the consequences. Although these necessary policies represent departures from pure open-access management and are not private property systems, the conceptual domination of the two extremes remains.

Indians have a particular and perhaps unique objection to private property systems: historically, such systems have accompanied the dispossession of Indians from their land. There are also other problems with pure private property systems. One is that land use is not always independent; air and water pollution and communicable diseases cannot be handled with such a system. Another is that inequality in wealth can develop and may not disappear. The Indian problem may be an example of this.

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[18] Imre Sutton lists a number of case studies in his bibliography (Sutton, 1975, pp. 80–88). Few of these are very analytical in the sense that the technological or economic issues are explored along with the cultural dimension. Sutton points out that many also do not describe the actual tenure institutions very well (p. 87).

Ironically, although there is very little evidence that Indians ever managed their resources with open-access management, the typical justification for such dispossession is that they have done so. The following subsection reviews the historical experience of Indians in order to illustrate their objections to private property management of their land. The subsequent subsection discusses the pros and cons of open-access management at greater length.

Common property and American Indian history

The following section, a review of historical issues relating to the purported treatment of land as "common property" by Indians, is not directly relevant to issues of project analysis. But since history is always relevant, this digression is worthwhile in further explaining the inevitability of misunderstanding between Indians and Whites on the subject of private and common property systems.

Indian societies which did not have problems have sometimes been accused of having them. An example is Henry Dawes' charge that the Five Civilized Tribes in Oklahoma were not going to progress because they held their land in common. In 1885, he told the Lake Mohonk Conference:

> The head chief told us that there was not a family in that whole Nation [one of the Five Civilized Tribes] that had not a home of its own. There was not a pauper in that Nation, and the Nation did not owe a dollar. It built its own capitol . . . and it built its schools and its hospitals. Yet the defect of the system was apparent. They have got as far as they can go, because they own their land in common. It is Henry George's system, and under that there is no enterprise to make your home any better than that of your neighbors. There is no selfishness, which is at the bottom of civilization. Till this people will consent to give up their lands, and divide them among their citizens so that each can own the land he cultivates, they will not make much more progress.[19]

Dawes' opinion of the Cherokee land tenure system was untrue; but he used the common property analysis to justify allotment. Since allotment under the Dawes Act devastated the Indian land base, Indians' response to a discussion of common property is almost automatically conditioned by memories of the rhetoric used by proponents of allotment. Since most analysis of common property problems leads to a recommendation that a "private property" system be set up, Indians' suspicions have a reasonable basis. Leonard Carlson provides documentation of the effect of allotment on Indians in his book, *Indians, Bureaucrats, and Land: The Dawes Act and the Decline of Indian Farming.*

Dawes' reference to an inconsistency between "Henry George's system" and private property is analytically incorrect; one can have Henry George's system and have private property, as shown by local governments throughout the United States today. George

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[19] Otis (1973), pp. 10-11.

(1879) himself claimed no inconsistency between private property and his proposed tax system [p. 405]. The difference between today's property taxes and George's proposal is that George proposed a *single tax* at 100 percent of the value of *site rent alone*. Improvements would not be taxes.

Dawes was probably also incorrect in his facts, for the Five Civilized Tribes, and the Cherokee in particular, were farmers. Cropland was held for exclusive use by the individual. The Cherokee Nation forbade individual Cherokee from selling land to outsiders; but this was a technique to preserve territorial integrity rather than evidence that the Cherokee used land under a "common property" system. Under America's system of expansion, purchase of land by non-Indians reduces the tax base and jurisdiction of the Indian government. A purchase of land operates as a cession of sovereignty; therefore, tribal governments reasonably insisted that all sales have their approval. Such rules are not proof that Indians managed internal property rights as common property systems. But the policy of the Cherokee to require that the Nation approve all sales has been taken as evidence that Indians owned their land "in common" in the sense that they practiced a common property system internally. This is an incorrect inference.

Perhaps a charitable explanation for Dawes' statement is that he was merely repeating a standard line of the nineteenth century about Indians. People believed then that Indians made inefficient use of wild resources because they lived from the hunt rather than from farming. Since evidence about actual Indian land management has not yet been assembled, the debate remains unresolved. Certainly in regards to management of fisheries, the Indians of the Pacific Northwest did not destroy salmon runs by overfishing them. It is non-Indian society which has had difficulty efficiently managing the salmon fishery.[20]

Thus, the historical problem in discussing private vs. common property systems is that Indians are suspicious of the private property language, and the common property language is associated with the nineteenth century ideology which was used to justify the taking of Indian land. Even clear evidence that Indians were making good use of the land, as reported by Dawes himself, was not enough to shake the grip of the ideology. Jennings (1976) explains the colonial origins of the 19th century ideology that justified the taking of land from Indians.

Within White society, the invention of the concept of "private property" is believed to be one of the main causes of economic growth. Individualism and private property are intimately connected. The rise of the bourgeoisie in England is often connected to the enclosing of common lands and the conversion of the "commons" into private property. This once done, the argument goes, social profit became positive and capital accumulation could occur. This ethnocentric theory of modern economic growth has been explained by Douglass North and Robert Thomas in *The Rise of the Western World: A New Economic History*. They summarize the argument as follows:

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[20] See Crutchfield and Pontecorvo (1979).

> Growth will simply not occur unless the existing economic organization is efficient. Individuals must be lured by incentives to undertake the socially desirable activities. Some mechanism must be devised to bring social and private rates of return into closer parity. Private benefits or costs are the gains or losses to an individual participant in any economic transaction. Social costs or benefits are those affecting the whole society. A discrepancy between private and social benefits or costs means that some third party or parties, without their consent, will receive some of the benefits or incur some of the costs. Such a difference occurs whenever property rights are poorly defined, or are not enforced. If the private costs exceed the private benefits, individuals ordinarily will not be willing to undertake the activity even though it is socially profitable.[21]

The body of their book illustrates ways in which the Netherlands and England managed to establish private property rights, while other countries such as Spain and France failed to do so. The argument continues with the assertion that further development and efficiency will follow if all instances of common property are reduced to private property.[22]

One difficulty with this rosy explanation for economic development is that the enclosing of the common in England also accomplished a transfer of property from those who could use the common to lords who obtain exclusive ownership to the land after the enclosures. No compensation was paid to those who lost their rights.

Indians have come to be suspicious of private property systems, because the allotment policy was imposed on Indian reservations with a rallying cry that the virtues of private ownership of land were going to be given to Indians. But Indians saw that their large land holdings were divided up among them using a small amount of land per family. The rest of the land was then declared "surplus" and transferred to non-Indians, usually through the homesteads. And individual Indians did not obtain control of their allotments. Nor were they able to use their allotments under a fair market system, for non-Indians sought ways to obtain the land cheaply.

These points show that common property systems and private property systems have long histories. Indians were not the first to find that a private property theory was used to take their land. English peasants had a similar experience. North and Thomas, and others subscribe to the theory that only private property rights are clearly defined. Others are vague, and for this reason inefficient. There is a common strand of thinking between the economists' arguments that private property is the key to growth and Senator Dawes' belief that "selfishness" is the basis of civilization. There also are close ties to the non-Indians who regard Indian generosity as the key to failure by Indians in economic life.

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[21] North and Thomas (1973), pp. 2-3.
[22] North and Thomas (1973), pp. 157-158.

This bundle of common analysis is all taken from people with the same cultural norms—individualism, private property, and so on. It is easy to label this analysis as ethnocentric, and thereby to dismiss it. A better route is to label it ethnocentric, and then understand that such analysis might be correct within the society which spawns it. If a people can only operate on "selfish" motives, then that people had best arrange its institutions to accommodate those motives.

One difficulty for Indians historically has been that Indians have been unable to exclude non-Indians from their land. Indian economies in frontier conditions were often based to a great degree on resources which non-Indians treated as open access resources. For instance, hunting was an open access activity among colonists, as was fishing. As the colonies expanded, settlers placed heavy demands upon such open access resources, and Indian economies suffered as a result.

A consequence of the treatment of Indian resources as common property to settlers as well as Indians is that Indians have had to struggle with their non-Indian neighbors to establish the point that Indian property is not property open to all. A major impetus behind the formation of Montanans Opposed to Discrimination on the Flathead Indian Reservation occurred when the Confederated Salish and Kootenai Tribes instituted a permit system for access to tribal land. Non-Indians living near tribal trust land opposed paying even a nominal fee for recreational use of tribal land. They regarded such an exercise of tribal property rights as discrimination against them. This attitude is a natural result of the historical treatment of Indian land as open access land on the frontier.

The federal government's conflict of interest in holding land "in trust" for Indians derives from the fact that the federal government is the representative government of the settlers, not the Indian. This may not be the place to go into the reasons that the federal government took a preeminent role in the allocation of transfer of land from Indians to citizens of the United States. One major reason was to minimize litigation among non-Indians with competing claims; the non-Indian with the federally-approved deed owned the land, not the non-Indian who purchased from the "true" Indian owner. Another reason to have federal approval of land transactions with Indians was to keep peace with Indians.

Common property as a current issue

Economists describe a "common property resource" as one in which large numbers of people or firms have free and open access. In addition, there are no regulations which limit any one person's amount of access. A *separate* idea is that of "communal land" or "community land," also described as "commons" and "common property." Many societies with such land do not manage it with a system of open access. Rights to use the land are limited, and complex institutions control the problems which can develop. Following American practice, economists often ignore the web of rules which a society uses, and assume that absence of European-type private property rights is evidence that open access is the management system in use.

Carlisle Ford Runge (1981) has provided an analytical review of the literature on this subject. He points out a mistake often made by advocates of private exclusive property rights. Such advocates tend to ignore the possibility that communities can solve the "common property resource" problem without use of private property systems. Such advocates reduce a choice among three options (open access, common property, private property) to a choice between two (open access, private property). He summarizes his argument as follows:

> Some economists argue that the proper solution for overgrazing a common range is to internalize its costs by making the public aspects of the range private. Instituting a scheme of such rights, if they are properly enforced, will create a market in the private rights to graze. This approach has led Demsetz, among others (Cheung, North and Thomas, Furubotn and Pejovich) to argue that the mere existence of common property rights over a scarce resource will lead to a tragedy of the commons because of the failure to internalize the social costs of grazing the last head of cattle. They argue that the enforcement of private use-rights to the resource will yield internal costs to each user equal to benefits in total and at the margin.
>
> There are three things wrong with the analysis. First, it does not distinguish between situations of open access (in which the main difficulty is unrestricted entry) and those of common property. This view implies the inevitable overexploitation of common property, an historically false position (Dahlman, 1980). Second, it treats the common property externality as if each individual's choices are independent of their expectation of others' choices. Thus, cost functions for each cattle owner are assumed separable in their arguments. Third, and most important, because individuals are assumed to act independently, the property rights paradigm abstracts from the crucial problem of each person's uncertainty about the actions of others.

Runge goes on to explain all three errors. The first one is dealt with by citing examples of communities which have managed common property without incurring the problems which Demsetz and others predict. The second and third are analytical ones which explain the mistakes made by the advocates of exclusive private property rights. He points out that the nature of the interdependence among the potential users of a common property resource is more complex than Demsetz and others assume. Each user cannot determine his best strategy—i.e., the number of cattle to graze—without knowing what other users will do. The private property advocates tend to assume that each user's decision is easy to determine.

Runge also suggests that observed overgrazing problems among traditional grazing communities occurs when the communities' institutions fall apart, due to excessive population growth, technological change, or changes in climate [23]. Political action by outsiders in a colonial context, as well as competition with immigrants, could also account for observed overgrazing problems. Therefore, overgrazing itself is not evidence that *functioning* common property institutions fail to manage the resource correctly.

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[23] Runge, p. 604.

This is the context in which to interpret the contribution of the two articles by Johnson and Libecap.[24] They point out the results of range management on Indian reservations in which the colonial context—regulation by the BIA—has limited the ability of users of the range to develop acceptable common property arrangements.

Johnson and Libecap have two separate but related arguments. The first is that the grazing land on the Navajo Indian Reservation is presently managed as an open-access system. More on this below. The second is that the methods followed by the Bureau of Indian Affairs in trying to improve range management systems on Indian reservations in the Southwest have not succeeded because the perceived rights of those using tribal range lands were not dealt with. Included in the list of reservations for which the Bureau failed to deal with overgrazing is the Navajo experience.

Consider the management problem facing an Indian tribe on an established reservation. What kind of property rights system develops on tribal land on a reservation after the federal government has agreed to the boundaries of the reservation? It appears that some members of the tribes establish herds and become users of the range. A problem arises once the herds grow large enough to strain the capacity of the range. How is the problem to be solved? We must note that the large herd owners will be among the well-to-do on the reservation. We do not know to what extent traditional demands on the rich in a tribe cause them to redistribute their wealth.

One solution would be for the political leaders of the tribe to arrange a management system of by mediating disputes among the ranchers and envious members of the tribe. But the history of Indian land tells us that few tribal leaders would be able to arrange matters without interference from the agent or the superintendent. At the end of the nineteenth century, there was not time to work matters out because the allotment policy was hanging over all reservations. After the end of the allotment policy, the Indian Bureau had maintained a powerful position through use of the Indian Reorganization Act and no land management system could be arranged without its approval.

Thus, on a reservation with substantial land holdings after the end of the allotment policy, the Bureau would have to be consulted about any land tensure system. Libecap and Johnson assert that the BIA has not followed a policy which recognizes any right of large herd-owners to compensation should a new range management system reduce their access to the range.

> The issue of increased transaction and political costs incurred by governmental agencies when prior claims are rejected has received little attention from economists. This may be due to the frequent acceptance of existing arrangements by the U.S. Government in assigning formal rights.

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[24] Libecap and Johnson (1980) and Johnson and Libecap (1980).

> Conflict between squatters and the Government in the 19th and early 20th centuries was largely avoided because the law recognized existing claims as valid. That occurred for mineral, agricultural and water claims on public land. In those three cases, the Federal Government gave occupants preferred status in granting formal (fee title) property rights.
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> This pattern, though, has not been followed in U.S. Indian policy. At the present time the Federal Government holds title Indian land, and formal use rights, where they exist, are granted to individuals through the Bureau of Indian Affairs and local tribal councils. In assigning grazing rights, the BIA has emphasized the equal distribution of tribal land. In the process it has rejected existing claims of large herders where they have been associated with severe overgrazing and where their holdings have been deemed unequal. Large herders have established informal control of range land on many southwestern reservations through prior appropriation and continued use. Accordingly, the assignment of formal grazing rights by the Bureau of Indian Affairs with its equalitarian criteria has involved uncompensated reduction in the land holdings of large herders. Resistence and conflict have resulted, increasing the costs to the Bureau of establishing and enforcing formal rights structures. These higher costs have retarded the development of formal property rights to range land on reservations where prior claims have been considered unequal. Their absence has led to severe overgrazing and low livestock-based income.[25]

Johnson and Libecap appear to feel the claim existing herders may have should either be recognized and transformed into "formal rights structures" or compensation should be awarded. Since the land is tribal land, the Bureau feels such recognition is unwarranted. Others, including some tribal members, may also not agree that such "preemption" of tribal land is a good policy.[26]

Johnson and Libecap do not examine the Indians' prior property rights systems. Many of the examples in their comparative article are drawn from the Pueblos, whose land holdings predate the European presence in the Southwest. Perhaps use rights among the Pueblos have a more formal history than the BIA or Johnson and Libecap consider.

Johnson and Libecap are believers in the ultimate superiority of private property as a land tenure system. They therefore err in failing to see virtues in alternatives, and in being willing to accept some of the questionable aspects of private property, particularly the injustice of the original allocation of property.

While the economic analysis of overgrazing in their Navajo article may be quite reasonable and even correct, the policy recommendation is not. It repeats the earlier error of the BIA in enforcing a technological solution without respect for the wishes of the current users of the land and without consideration of other options. Libecap and Johnson (1980) examine the evidence and reach the conclusion that the Navajo range is once again overstocked and overgrazed. It had been in that condition in the 1920's; the BIA conducted a stock reduction problem in the 1930's that was much disliked by the Navajos. The authors review that history, and conclude that the consequence of the experience was to make it difficult for the tribal government to regulate overgrazing when it took the function from the Bureau. Their argument is a standard one for present-day advocates of private property systems. It has an extra twist, namely that the presence of small herds increases the costs of enforcing exclusive use. This fact increases the problems created by the forced reduction, which reduced large herds more than it reduced small ones. As Spicer pointed out in 1952, the use of force to change the property system of a large group of people can cancel any beneficial effects that the change may have for technological reasons. The grazing of sheep was the primary source of income for the Navajo in the 1930's. The program merely reduced the number of sheep on the range; there was no attempt to provide substitute income sources.

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[25] Johnson and Libecap (1980), p. 333.

[26] A very large controversy occurred in the United States over the practice of "preemption" in expansion of the frontier. A preemptor was a settler who occupied land illegally prior to its being opened for settlement. The controversial policy was to recognize such settlers as legal owners. Johnson and Libecap seem to feel no controversy was involved.

What is the proper strategy in managing the Navajo Range? They assume that fences is what would be required to enforce private property rights, and further argue that large units would be needed in order to reduce the costs of fencing the land, managing the herds, and having access to water. They seem to be arguing that the many small herders should be removed from the range, with large herders taking over. Although the problem is complex, surely repetition of earlier mistakes should be avoided. Further, non private-property management systems should be considered.

What are the implications of this discussion of common property for project analysis? There seem to be at least three lessons. First, there is the negative implication from economic theory, as explained by Runge: private property rights are only one of several means of managing a community's land. Other rules can be and have been used.

The second lesson is that private property rights will not be popular with Indians. Thus, it is fortunate that options exist. Despite Senator Dawes' claim about progress, Indians have found that private property systems were set up in a way that lead to the transfer of land from Indians to non-Indians. In addition, evidence exists that some Indian tribes preferred to spread the benefits of the land more evenly that occurs under private property systems. Also, current federal law makes tribal land common property, and that fact must be dealt with.

The third lesson is that complicated land-use arrangements probably need to be worked out for many projects. First impressions of land tenure situations will probably lead to an optimistic view of the ease of solving them; but the conflicting interests of the BIA as trustee and various factions in a tribe surely cannot make land policy easy. In addition, historical experience makes Indians suspicious of the schemes that most non-Indians think of first, namely private property systems. Such systems have been set up unfairly and with force.

F. TRANSACTION COSTS

One factor that may inhibit establishment of Indian enterprises on Indian reservations is high costs of organizing and conducting business. For instance, the process of leasing land for a tribal member can be full of many delays as he obtains approval from the tribal council and the BIA. These are "transaction costs"—the costs of finding workers, capital, land, purchasers for products, and materials to use. These transaction costs can sometimes overwhelm small enterprises. One of the complaints about the recent increase in regulation by the federal government—for the environment, for affirmative action, for worker safety, for consumer health—is that these regulations increase the cost of doing business. Part of the extra cost is the purchase of better equipment, the use of more expensive techniques. Another part is the filing of forms for government approval. That part is an increase in transaction costs. Every business must deal with transaction costs; cities have zoning laws, there are liability issues that require insurance, sometimes bills must be collected through use of lawyers or collection agencies.

Such costs are often overlooked; but they can become burdensome. If a firm is in a competitive field, with no advantages of location or special access to inputs, an increase in transaction costs can divert resources from the production of goods or services, threatening profits.

This section will discuss some of the ways in which transaction costs might be greater because of the special position of Indian reservations in the American political system. The focus is upon those transaction costs which are caused by the BIA and by jurisdictional problems between state and tribal governments. Some other issues can be examined from the point of view of transactions costs. The problem of common property is classified by many as a topic within the field of transaction costs, because the problem of open-access can be seen as an example of high costs of communication among the users of an open-access resource. The problem of federal conflicts of interest is a transaction cost issue. For instance, if water rights are in dispute, the transaction costs of acquiring water is very high—especially if the competing user is a federal water project. But these extreme examples will not be included here.

It is convenient when discussing transaction costs to distinguish three aspects of a transaction: (1) collecting information, (2) negotiating agreements, and (3) enforcing agreements. One then discusses the ways in which the BIA and jurisdictional conflict increases the costs of each of these parts of a transaction.

These costs are most evident in factor markets. The ranking seems to be that transaction costs are very high when Indians deal in the land market, less high in the capital market, and less high still in the labor market. These qualitative judgments will be defended in this section by examining the legal environment in which Indians do business. Unfortunately, few data are available to determine if the costs identified here are significantly greater than similar costs for other entrepreneurs. The following discussion is organized by type of market, beginning with the land market.

The land market

Tribal governments and the enterprises which they create face extra transaction costs of all three types in land markets. Tribes must bear two types of information costs which are greater than those borne by normal landowners in the United States. First, inventories are under the control of the BIA. Although the Bureau should be a source of subsidy for estimating the value of resources contained on Indian-owned land, the operative effect can be to raise barriers in obtaining resource surveys. For seismic exploration, for instance, a poorly written or poorly enforced contract can limit Indian access to key oil and gas data. This could make it expensive for Indians to obtain the information needed to develop the resources at the *best* time for Indians.

Second, the BIA's land records are in sorry shape in some parts of the country. "Land Records and Title Documents," 25 CFR § 120, is one of the shortest parts of the regulations, signifying the small importance the Bureau gives the issue. This poor system of recordkeeping compounds the difficulties caused by large amounts of land in heirship status. The dispersion of heirs makes it expensive to find the owners of allotments.[27] This expense, in turn, makes use of heirship land more difficult.

Negotiation costs are also higher than normal for tribal enterprises. To acquire land, tribes must surmount high barriers if the desired land is held either in fee simple or in allotted status. The Bureau becomes involved in both cases. A tribe may hold land in fee and pay taxes, although few tribes wish to do that. To place fee land back in trust requires that the land not be encumbered and that the Bureau approve. To acquire allotted land, the tribe must use the services of the Bureau to negotiate with the individual owners and to have the land appraised. Both steps can be very time-consuming.

Once a tribe has the land to use, further extra negotiation costs exist because the Bureau must approve all uses of tribal land held in trust and because tribal land is held in common by a tribe. It is difficult to identify the appropriate non-Indian institution with which to compare the Indian situation in order to determine the magnitude of the Bureau's impact. Corporations have an autocratic structure which does not compare to tribes. State and local governments have representative mechanisms which may be more comparable. But such governments do not run businesses. The constitutional approach in the U.S. is for such governments to transform state-held land into privately-held land. The government participates in the economic return to that land through properly taxes.

Individual Indian entrepreneurs must deal with both tribal and federal land-use regulation. On the Navajo reservation, for instance, Reno describes the process as follows:

> Land can be obtained for a business site through procedures prescribed by the Tribe and the BIA. An applicant

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[27] Langone (1976b).

> for land on which to establish a business must first obtain the approval of the chapter grazing committee and the consent of the recognized user. These approvals obtained, must work through a series of farther approvals by BIA, PHS, and tribal offices, covering various aspects of environmental protection, business feasibility, legal compliance, and land use. The Advisory Committee of the Tribal Council gives the final tribal approval to these leases for land use; in addition, BIA approval is required on all land transactions.
>
> This process is lengthy and the applicant is beset with delays and frustrations. The procedure is therefore an effective restraint on business development.[28]

Enforcement costs are high for Indians. In past years, though less at present, the federal government has freely taken Indian land with little or no payment. Elements of federal confiscation exist on some reservations even today; the recent experiences with federal and state dams are good examples.[29] Trespass is another problem. Some neighbors of Indian reservations have difficulty distinguishing between federal land and land held by the federal government in trust for Indians. Nor does the federal government enforce the private rights of Indians over their land with the diligence state governments enforce the rights of other private land owners.

Protection against confiscation and trespass are only two of many types of enforcement costs. Once a tribe has signed a contact for the use of land, the enforcement of the terms of that contract are left to the BIA in the first instance. Tribes could take the other party into court on their own if they wish. The case for higher than normal enforcement costs must rest on poor police action by the Bureau. News reports and hearings in 1980-1981 focused attention on an example of this, irregularities in enforcement of oil and gas leases on the Wind River Reservation.

Capital markets

There is little additional expense for Indians in acquiring information about the sources and uses of capital. There are additional costs, however, when Indians negotiate contracts for borrowing or lending capital and when they enforce those contracts.

Tribal enterprises face time delays, uncertainty of regulation, and out-of-pocket costs in capital markets because of BIA powers. As lenders, tribes need Bureau approval of major investment of tribal funds.[30] The history of poor portfolio management by the Bureau has been exposed in a series of reports by the General Accounting Office [for instance, Comptroller General of the U.S. (1972)]. The right of the Bureau to control tribal harvest of timber is another example of Indian weakness in controlling their own capital. As borrowers, Indians also must acquire Bureau approval and must negotiate with lenders in an environment of substantial uncertainty about what appropriate contract clauses may be.

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[28] Reno (1981), p. 21.
[29] Sutton (1975), pp. 166-171.
[30] Price (1973), p. 717.

The negotiation process must be influenced by the high costs which exist for enforcing credit contracts. These costs arise for two reasons. First, state jurisdiction over contracts is not available and no low-cost substitute appears to exist.[31] Indian governments could substitute for this vacuum in civil enforcement law, but face high set-up costs due to their small scale.

Of these costs faced by tribal enterprises, only the enforcement costs problem is serious for individual Indians. Federal approval power over tribal contracts does not apply to the negotiation process for individual Indians. They may face discrimination by banks, however, based on stereotypical views of Indian competence and because of jurisdiction problems.

The labor market

The high rates of unemployment among Indians seem to imply that they face high costs in finding employment. But it is difficult to identify any legal basis for such costs. There is evidence that some employers have stereotypical views, which would raise information and negotiation costs above that of whites. But it should not raise them above the costs borne by other nonwhites such as Blacks. Yet Indians have a higher rate of unemployment than do Blacks. The answer to this puzzle may lie in two areas.

(1) High transaction costs in the land and capital market reduce the level of economic development on reservations, creating a local long-run problem of insufficient aggregate demand. Transaction costs are like tariffs in this context. The desire of Indians to remain on reservations reinforces this effect.

(2) Indians face high transaction costs in the human capital market. The federal government has interfered with the right of Indians to acquire the education they wish rather than the education desired for them by others. This lack of education and subsequent training places Indian workers in a position similar to that of other low-skilled individuals in the United States, who also have difficult employment problems. Perhaps the costs facing those non-Indian workers and the transaction costs facing Indian workers are very similar. The unemployment problem for Indians is actually a combination of an education problem and a problem of general economic development, with the second having the greater impact.

In conclusion, there are reasons to suspect that higher transaction costs affect tribal enterprise, individual enterprise, and wage work for Indians. Such possibilities should be examined in evaluation of projects, particularly projects which involve small business activity by Indian entrepreneurs. More data is needed before the quantitative significance of these considerations can be assessed.

G. SAVINGS

The general impression among non-Indians is that Indians, either as individuals or as a group, do not provide sufficiently for the future. It is often further asserted that this failure to save is a cause of poverty. There is much evidence, however, to suggest that Indians care a great deal about the future of their communities and their families. The first standard applied to tribal leaders is that they successfully protect the land against further transfer out of the community. Indians emphasize the provision of education for their children. One of the main unifying issues in pan-Indian politics is that Indians should control the education of their children. The motivation is partly to protect Indian culture against non-Indian culture; but the greater motivation is to protect Indian students and to encourage their development. These two issues, the protection of the land and the protection of children could not be so important if Indians were unconcerned about the future. It is therefore paradoxical that failure to save is widely regarded as both a fact and a problem in Indian economic development.

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[31] Mudd (1972).

The paradox is partly caused by the abundance of reasons for Indians not to save. Indian generosity is said to decrease the desire to save. The constraints of a governmental welfare system is said to discourage accumulation of property. Patron-client electoral systems may encourage tribal voters to desire per capita distribution of judgment funds rather than tribal investment of such funds. External effects in the use of land due to open-access problems may reduce the incentive to maintain and to upgrade the quality of the land. Investment itself by a tribe might be seen as a common property resource, thus causing a free rider problem. Uncertainty about federal control over trust property may also induce Indians to invest less in trust resources; the reason is that such investment would transfer income from full control by Indians to shared control with the federal government. Finally, Indians are poor, and the rate of saving among the poor is widely believed to be lower than that of the rich.

All of these speculations require an answer to this question: How much do Indians now save? A search through a number of books on Indian economic conditions reveals no data on the question of savings or savings rates. One study did report results of a survey; but two problems with the study mean that the numbers reported are not reliable enough to be quoted.[32] It is extremely difficult to obtain good data on the amount or the rate of saving of any population. Consider two approaches. One is the household survey; households are asked to report their income and the expenditures during a specified period. If carefully done, such surveys can reveal much. But most communities greatly resist the invasion of privacy and the bother of filling out a complete expenditure survey. Since most families do not keep careful records of their expenditures, recollection must be used; and the recollection of expenditures and savings is itself subject to error. Although these problems can be overcome, well-done household surveys are expensive. Therefore, they are rare.

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[32] Kent and Johnson (1976) report survey results from the Yankton Sioux Reservation. Although their data were based upon a sample survey, they did not provide the reader with estimated confidence intervals for the reported results. A second problem is that they report "weighted" results (p. 13) without explaining the weighing procedure or sampling method used. They do not indicate the frame which was used to draw the sample. Finally, their questionnaire asked for respondents to provide a percentage breakdown of their expenditures. The questionnaire asked only for respondents to check one of five categories. How the categories were transformed into point estimates in their tables 4 and 5 is not explained. The five categories were these: 0%, 1-10%, 10-25%, 25-50%, and over 50%. Respondents were asked to check one of each of these for a total of 15 expenditure categories, which included savings as a category. It is difficult to see how such general data can provide the narrow estimates which the authors use in the body of the paper. It seems possible for respondents to answer in a way that their estimated percentages sum to more than 100%; since the authors do not explain how this possibility was avoided, the reader is left wondering how valid the results are.

A second source of data on savings is aggregate information on income and output—the national accounts of a country, a state, or a community. In accounting studies, however, savings information is usually estimated as a residual—the difference between estimated income and estimated expenditures. Consequently there is a high ratio of error to truth in the savings figures. For underdeveloped countries, the wise researcher averages several years' worth of data in order to attempt a correction for such error. One requires a complete and fairly accurate social accounting effort in order to provide a good estimate of savings. No complete set of accounts for an Indian reservation is available at present. The conclusion to reach is that we simply do not know what savings rates exist in Indian communities.

A final question on the savings issue: Is it true that rich people became rich through saving, and poor people are poor because they did not save? Some rich people were lucky enough to find oil on their property, or to invent a useful gadget, or to be born with a beautiful voice. Some poor people lost their property to a swindler (who is therefore rich), or became ill with an expensive but not deadly disease, or simply were never lucky. Indians in particular had the bad luck of owning valuable property but being unable to defend it against a better armed and more numerous adversary.

Lester Thurow argues that many rich people became wealthy through luck. He offers this example of the process:

> . . . in the early 1950's, you might have invested in a risk class of firms that included Xerox. In 1950 all of these firms would have looked alike and all would have had an equal expected rate of return. [Afterwards], some would have gone broke and disappeared, most would have earned the market rate of return, and a few, perhaps one, would have been an investment like Xerox. Those who owned shares in it became wealthy; they won the lottery.[33]

Large fortunes are created through such luck, the capital gain which occurs when the market price of an investment rises upwards because everyone realizes how much profit will be made in the future from the investment. Evidence to support Thurow's argument is provided by Robert Eisner. He recently estimated that between 1946 and 1977, tangible capital in the United States increased by $2,920 billion. Total net private domestic investment during this period was $1,372 billion. Capital gains, wealth that came into existence by means other than by savings, accounted for more than one-half of all the increase in the value of wealth.[34]

In conclusion, low rates of savings, if they exist among Indians, are probably a relatively unimportant obstacle to economic development. No evidence is available to establish at what rates Indians do save. Given relatively low incomes, even high savings rates would not provide Indians with much internally generated capital.

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[33] Thurow (1975), p. 151.
[34] Eisner (1980), p. 200.

H. A SUMMARY CHECKLIST OF QUESTIONS

This survey of possible sources of obstacles to economic development on Indian reservations does not yield a specific set of rules or guidelines to apply to the selection of projects. It gives instead a list of questions, a checklist of issues to examine. Although some of the obstacles can be significant, to be specific or dogmatic about them is both difficult and dangerous. The topics of this chapter are slippery. This conclusion to the chapter summarizes by listing questions which can be used to start the process of considering institutional issues in particular cases. The importance of the answers will no doubt vary greatly depending upon the particular Indian community.

Authority

Different cultures deal with authority in different ways. The text suggested two examples to show how Indian and non-Indian attitudes about proper exercise of authority may differ. Those examples may have limited applicability. They are examples of answers to the following questions.

- What are the acceptable ways for members for a community to exercise authority over one another?
- What are the acceptable ways for them to accept or give direction to outsiders?
- What methods do they like to use in obtaining consensus about the direction of change which the community may desire?

Generosity

Many Indian communities value equality. As a consequence, they share income, particularly when poverty is a problem. Although an ethic of generosity may not be an obstacle to general economic growth, it can be an obstacle to particular forms of business development. In considering a particular project, ask the following.

- Will the project benefit only a few people in the community?
- If it does benefit a few, how will those recipients respond to pressures from their neighbors?
- Can the community as a whole share the benefits?
- Does this project distribute new income in a manner satisfactory to the values of the community?

Welfare

The vulnerable position of welfare recipients requires that new sources of employment offer realistic long-term improvement in order to obtain the support of those on welfare. The following two questions suggest that high standards of social profitability be applied when the beneficiaries of a project are trapped by the welfare system.

- Is this source of employment permanent?
- Is the real increase income sufficient to reward the former welfare recipients for the effort required of them?

Patron-client politics

One of the most common recommendations about enterprise development on reservations is that politics be separated from business. But stating that as a goal is one thing; achieving it is another. If a reservation political system has become a patron-client system, then perhaps studying the network of patrons and clients can assist in determining the viability of an institutional separation of business enterprise from the patronage system. Alternatively, some patrons and their factions may become supporters of projects which benefit them. It may be necessary for all the powerful political leaders to come to an agreement, or perhaps development can proceed without resolution of factional conflict.

The section on patron-client politics should not leave the impression that all political issues are patron-client issues. This is not the case. Some reservations have political systems in which the legitimacy of the authority of tribal leaders is not based upon their ability to deliver to their clients. For example, many Pueblo communities retain their traditional political systems. Legitimacy is based on the historical experience that traditionally-selected leaders act in the community's interest. The following questions apply only to situations in which patron-client systems have come into existence.

- How can this project be set up in a manner that insulates it from patronage pressures?
- If the project will inevitably be drawn into a patronage situation, how can the rewards which patrons give their clients be formulated in a manner which is consistent with the long-term success of the project?

Common property

The long section on common property problems focused upon problems which may occur because of the trust status of Indian land, particularly tribal trust land. First, open-access management is a troublesome management system which can lead to wasteful use of land. An example is overgrazing. But Indians have good reasons to be suspicious of private property systems as an alternative. Therefore, if an open-access situation is causing problems, solutions should be sought in other management systems which retain the community's ownership of the resource but which use it efficiently. The following questions might get at these issues, if a project involves changing land use.

- What are the conflicting interests and opinions of the members of the tribe and the BIA in the land which will be used for the project?
- If there is an open-access system in use, how will current users be compensated should a different system be implemented?
- If a proposed new system has been modeled upon a private property system, what are the guarantees that control of the land will remain with Indians? If these guarantees are good, will the community accept them in any event?
- What management systems are available which are neither open-access nor private property but are reasonable?

Transaction costs

The high costs of organizing and conducting business on Indian reservations needs to be taken into account. The main question is this:

- Have the costs of conducting the needed transactions been realistically estimated?

Since high transaction costs create problems, accurate foresight can perhaps lessen the impact. For instance, if delays in obtaining needed approvals will occur, then it would be wise to avoid committing too much capital before the needed permission is granted.

Low savings

The main point of the section on saving was to argue that insufficiency of savings is not a good explanation for Indian poverty. Very little insight relevant to specific projects is gained from that general discussion. Two points can be made, however:

- Suppose a project is designed in a manner which calls for earning to be reinvested in order for the project to expand. What of the other institutional obstacles might also be a potential obstacle to such reinvestment?
- Suppose internally-generated capital is needed to some degree; to what extent are other institutional obstacles contributing to a low desire to save either by individuals or by the tribe?

Conclusion

As Albert Hirschman (1971) pointed out in another context, belief that obstacles to economic development are insurmountable is itself an obstacle. One purpose of this chapter is to show that not all of the alleged obstacles are such. Differences in values about the proper exercise of authority can be circumvented through institutional innovation. Generosity can be used in a positive way once it is recognized. Patron-client politics are not necessarily bad. The impact of high transaction costs can be mitigated if they are foreseen accurately. To the extent that real obstacles are met and conquered, further benefits can occur, since success in the face of stiff odds can lead to further success simply by improving one's self-image. Analysis of the feasibility and wisdom of particular development projects certainly needs to include examination of institutional issues such as those raised here. Others also may be important. But recognition of such obstacles should be accompanied by a realistic assessment of their significance and awareness that they often are less significant than they seem.

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CHAPTER II—AN EXAMPLE OF A SYSTEM OF RESERVATION ACCOUNTS

In recent years, many have proposed that it would be useful to have accounts for Indian reservations that would be similar to the national accounts of the United States. In place of Gross National Product, for instance, one would have Gross Tribal Product. Several reasons motivate these proposals. The economies of Indian reservations are felt to be structurally unusual. For instance, it is felt that the amount of leakages from the reservation economy may be higher than in other small regions. The lack of developed banking and capital market institutions means that the flow of funds among such institutions may be small. Dependency on intergovernmental transfers may weaken individual or governmental decision-making. Although widely believed, most of these views are supported by weak evidence. It would be valuable to have some thorough studies which examine the structure of reservation economies and demonstrate whether these beliefs are correct. This chapter presents a system of accounts which will be used in Chapters 4 and 5 to show the impact of a project on a reservation economy.

Such a system of economic accounts would also allow us to record progress in achieving economic self-sufficiency. Baseline data is needed so that both tribal governments and the federal government can measure changes in reservation economies. Among the goals of economic self sufficiency are the following: (1) less dependence on transfer payments to individuals and to governments, (2) a diversified and stable economic base, (3) fewer leakages and greater exports to the surrounding economy, and (4) maintenance or improvement in the quality of income distribution among tribal members.

What type of accounts are best suited to illustrate both the special characteristics of Indian reservations and to chart change? Because economic structure is key, more is needed than a system of accounts like the GNP accounts used in the United States. Recently, the World Bank has supported the construction of a "social accounting matrix" for each of a number of countries. Such a matrix, called a SAM for short, is a large table which reveals more about the structure of an economy than does a system of national accounts. One part of a social accounting matrix contains the national accounts. Another contains interindustry or input-output transactions. A third shows the flow of funds among institutions which participate in saving and investing. A fourth records the distribution of income among institutions. This chapter will explain how a social accounting matrix might look for a reservation and will show what uses it might serve.[1]

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[1] The original work on social accounting matrices occurred in Cambridge, England, under the direction of Richard A. Stone. Several chapters in *Mathematics in the Social Sciences and Other*

Continued

This chapter is organized as follows: The next section introduces the idea of a social accounting matrix. The subsequent section presents a 4 by 4 example of a social accounting matrix. This is the smallest version of a SAM; it serves to give a picture of the "forest." After describing the 4 by 4 example, a number of ways to describe the structure of an economy are presented using measures of dependence and interdependence from the data in the SAM. Then, the 10 by 10 example is described and examined. It gives a picture of "stands" in the "forest." This example also can give measures of the structure of an economy. The 20 by 20 example is described next, revealing a few trees. It is consistent with the 10 by 10 version, and provides greater detail.

The numbers in these examples are *purely imaginary*. The 20 by 20 example was created with an attempt to be realistic but without data from any single reservation. The other two examples were derived from the 20 by 20 example by addition of related accounts.

General description of a SAM.—A social accounting matrix takes receipts and expenditures of each part of a reservation economy and displays the exchanges among parts of the economy on a single table. Separate "accounts" are created for each part of the economy. Each entry in a social accounting matrix is an expenditure for one account and is simultaneously a receipt for another. For instance, households receive income when they work. Their wages are an expenditure of their employer and are receipts for them. When households purchase something produced on a reservation, the purchase is a receipt by a firm and an expenditure by a household. In the accounts, the purchase would show up on the account for firms as a receipt from the account for households. The SAM approach is highly *flexible* because there are many different ways to define accounts. The three examples presented here give an introduction to this flexibility.

In setting up a SAM, accounts would be created for each major section of an economy. The SAM would then show the exchanges of money, labor, goods, services, and so forth among all sectors of the economy. Such a matrix would have *structural features* which would allow us to understand the driving forces of the reservation economy. For instance, what portion of the gross reservation product is accounted for by government purchases? How is investment financed? What is the pattern of transfer payments and taxes between households and governments? Which productive activities on the reservation purchase inputs that are also produced on the reservation?

Many of these questions can be answered by separate analysis using just the relevant data for the question. But there is an advantage to attempting to outline the entire picture of expenditures and receipts of an economy through a single table. Each entry has

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Essays (1966) explain the basic principles. In particular, the chapter "Multiple Classifications in Social Accounting" is useful. One of Stone's students, Graham Pyatt, continued this work at the World Bank, enlisting many co-authors. Summaries of this work is available in G. Pyatt and Jeffery Round (1977) and (1978). I found a seminar by Jeffery Round at Harvard University to be very useful and have adapted his presentation of the SAM idea in this chapter. Also, the World Bank has published a working paper, "What is a SAM? A Layman's Guide to Social Accounting Matrices," by Benjamin King. I would like to thank Karen Polenske for useful discussions on this topic.

two possible sources, and entries can be checked against one another for consistency. Each transaction is recorded as an expenditure by the purchasing sector and as a receipt by the selling sector. This is an advantage when one sector does keep good records and another does not. The better source of data can be used. In addition, some entries are not available but can be estimated by subtraction from others. When the efforts has been made to assemble data from many sources, to check the data against each other, and to reconcile differences, the result is an internally consistent picture of the reservation. This is superior to any partial account of the reservation economy. The improved quality of the data is well worth the additional work involved in assembling and reconciling data from different sources.

In setting up a SAM, the analyst must decide the boundaries of the economy to be described by the matrix. Several options are available. Gross Reservation Product, GRP, would describe all economic activity within the boundaries of the reservation. This would include Indians and non-Indians alike. It corresponds to the idea of "Gross Domestic Product" in the terminology of the United Nations. A second option is "Gross Tribal Product." This would use the nationality of the person, firm, or government as the defining boundary. All tribal members, whether they reside off or on the reservation, would be included. This corresponds to the concept of "Gross National Product." Other options would be to do some clearly defined combination of these two. In the example to be presented below, I have in mind all resident Indians on a reservation. This is *neither* GRP nor GNP under the definitions just given. If I were to modify the example, I would move it towards the Gross Reservation Product definition, by including non-Indians resident on the reservation.

The need for better statistics about Indian reservations has been recognized by a number of different observers. In 1969, Stephen Langone of the Library of Congress proposed that data on each Indian tribe be collected in a handbook. His proposal was the first essay in the Joint Economic Committee's collection of articles titled *Toward Economic Development for Native American Communities.* In 1976, the General Accounting Office published a Gross Reservation Product figure for the Fort Apache Indian Reservation. Recently, the Council of Energy Resource Tribes has begun a program to estimate GRP for a few reservations, with funding from the Administration for Native Americans. These are some of the proposals and activities which have occurred on the subject of creating reservation accounts.

Since Langone's proposal, more resources have been directed toward collecting data which profiles reservations. In 1970, the Bureau of the Census redrew their enumeration districts so that they corresponded to the boundaries of Indian reservations. The Census Bureau published a special report on Indians using the data from the 1970 Census. In 1980, a special questionnaire for Indian reservations was used to supplement the other questionnaires.

Because of the recent effort of the Census Bureau, the job of setting up a social accounting matrix for a reservation will be easier than in prior years. In addition to the Census of Population, county data from other censuses can be used to estimate sales, payrolls, and inputs for many of the economic activities on a reservation. The data from the censuses of agriculture, manufactures, services, and wholesale and retail trade will be most useful for those reservations whose boundaries approximate county boundaries. But data from censuses will not be enough. The input-output transactions of production activities on reservations would require separate interviews with a sample of economic enterprises on the reservation. The accounts of the governments on a reservation would give important information about the flow of funds for financing investment. A household survey would be needed to determine patterns of consumption, saving, and the payment of taxes.

In conclusion, several important benefits to a reservation follow from creation of a SAM. First, the tribal council and its staff can acquire a better understanding of the linkages between the economy of the reservation and that of the surrounding region. Second, special characteristics of the reservation economy will be apparent. Third, the impact of proposals for economic development can be analyzed using the SAM as a baseline. Without a picture of the present on a reservation, plans for the future are difficult to evaluate.

A. A 4 BY 4 SOCIAL ACCOUNTING MATRIX

Table SAM-1 gives the lists of sectors for each of the three examples. The classification system is "nested;" each of the ten sectors in the second example fits into only one of the first example. Similarly, the twenty-account example is an elaboration of the ten-account example.

Tables SAM-2 through SAM-7 give a series of pictures of a social accounting matrix. Tables SAM-2, SAM-4, and SAM-6 use symbols as entries in the table, while Tables SAM-3, SAM-5, and SAM-7 present numbers. There are four main types of accounts: production, institutions, capital, and rest-of-world. Each type is entered as one of the four accounts for this table. Each type of account has many different classifications within it, which will be shown in the subsequent examples.

For instance, production accounts might be agriculture, construction, manufacturing, and services. All production on the reservation would be classed into one of these production accounts. Examples of the second type of account, institutions, are tribal enterprises, Indian private enterprises, non-Indian enterprises, tribal government, other government, Indian households, and non-Indian households. Factors of production (land, labor, and capital) are classified as institutions. Each of the institutions, except factors of production, can have a capital account. The rest-of-world account would have two parts: Exports and imports of goods and services, (the "current" account) and inflows and outflows of funds (the "capital") account. For the first example, all the entries in each type of account are added together to give the big picture.

Table SAM-1

The Nesting System for the Examples

For Accounts	Ten Accounts	Twenty Accounts
Production	Agriculture	Agriculture
	All Other	Mining
		Manufacturing
		Housing
		Other
		Gov't Industry
	Imports	Imports
Institutions	Firms	Private Indian Firms
		Tribal Enterprises
	Households	Households
	Government	Federal Government
		Tribal Government
	Labor	Labor
		Self-Employment
	Property	Private Capital and Land
		Tribal Capital and Land
Capital	Capital	Firms' Capital
		Households' Capital
		Governments' Capital
Rest-of-World	Rest-of-World	Rest-of-World

Table SAM-2

Final Entries in a 4 by 4 SAM: Symbols

EXPENDITURES

		Production	Institutions	Capital	Rest-of-World	Totals
RECEIPTS	Production		C	I	X	C + I + X
	Institutions	Y			N	Y + N
	Capital		S		F	S + F
	Rest-of-World	M				M
	Totals	Y + M	C + S	I	X + N + F	

Table SAM-3

Final Entries in a 4 by 4 SAM: Numbers

($000's)

		EXPENDITURES				
		Production	Institutions	Capital	Rest-of-World	Totals
RECEIPTS	Production		28,300	2,100	10,763	41,163
	Institutions	17,150			15,400	32,550
	Capital		4,250		-2,150	2,100
	Rest-of-World	24,013				24,013
	Totals	41,163	32,550	2,100	24,013	

Table SAM-4

Intermediate Entries in a 4 by 4 SAM: Symbols

EXPENDITURES

		Production	Institutions	Capital	Rest-of-World
RECEIPTS	Production	A			
	Institutions		D		
	Capital			L	
	Rest-of-World				

Table SAM-5

Intermediate Entries in a 4 by 4 SAM: **Numbers**

		EXPENDITURES			
		Production	Institutions	Capital	Rest-of-World
RECEIPTS	Production	1,337			
	Institutions		24,470		
	Capital			50	
	Rest-of-World				

Table SAM-6

All Entries in a 4 by 4 SAM: Symbols

		EXPENDITURES				
		Production	Institutions	Capital	Rest-of-World	Total
RECEIPTS	Production	A	C	I	X	A + C + I + X
	Institutions	Y	D		N	Y + D + N
	Capital		S	L	F	S + L + F
	Rest-of-World	M				M
	Totals	A + Y + M	C + D + S	I + L	X + N + F	

Table SAM-7

All Entries in a 4 by 4 SAM: Numbers

($000's)

EXPENDITURES

RECEIPTS

	Production	Institutions	Capital	Rest-of-World	Totals
Production	1,337	28,300	2,100	10,763	42,500
Institutions	17,150	24,470		15,400	57,020
Capital		4,250	50	-2,150	2,150
Rest-of-World	24,013				24,013
Totals	42,500	57,020	2,150	24,013	

Each sector in the economy is listed once as a column heading and once as a row heading. Each entry in the matrix in an expenditure by the sector in column heading and a receipt by the sector in the row heading. For example, the first entry in the first row of Table SAM-2 is "C", representing consumption by institutions. Table SAM-3 shows that consumption totals $28,300,000. Consumption items are purchased by institutions from production.

There are two types of entries: *Final* and *intermediate.* Final entries represent exchanges between two different types of accounts. For instance, the purchase of consumption from production by households is a final entry because one account is a production account and the other is an institution account. An example of an intermediate entry is the payment of income taxes by households. This is an exchange between two institutions and is classified as an intermediate entry.

The reason to distinguish final from intermediate entries is that intermediate entries "cancel out" when one looks at Gross National Product (in our case, Gross "resident Indians" Product). One does not want to double count some items when determining total value added on a reservation. Both types of entries are *equally* important, however, in describing the structure of an economy. Intermediate entries are perhaps more important than final ones in describing the structure of an economy. It is convenient to make this distinction between final and intermediate entries because the distinction relates the SAM to the more familiar categories of the National Income and Product Accounts of the United States.

Using this distinction, we begin to describe the 4 by 4 example by examining the final entries. Table SAM-2 gives the final entries in symbols, and Table SAM-3 gives numerical values to the entries. The *first row* shows sales by the production sector of the economy. The first entry is "C" under the institution column, which is $28,300,000 in the numerical example. This represents the purchase of consumption goods by institutions. All consumption by households is included in C; examples would be the purchase of food, clothing, gasoline, and so forth. Also included in C is the purchase of supplies and the hiring of people by governments.

The second entry in the production row is "I" under the capital accounts. This represents all purchases of investment goods by institutions on their capital accounts. For instance, the construction of a house is investment by a household. The building of offices and manufacturing facilities is investment by firms. The building of roads, schools, and hospitals are examples of investment by governments. These total $2,100,000 in the numerical example.

The third entry in the first row is "X", under the rest-of-world column. This represent exports of goods and services from the reservation. If the reservation produces timber and cattle, then sales of timber products to off-reservation purchasers is an example of exports from the timber production account. Sale of yearling calves would be exports from the agricultural sector. Exports total $10,763,000 in the numerical example.

Now we turn to the *first column,* which gives the expenditures of the production accounts. There are two types of final expenditures. The first is the payment of income to institutions. This is represented by a "Y" in the second row of the first column, which totals

$17,150,000. This is total Gross National or Gross Reservation Product. When activities use labor, they pay wages to someone in the group of institutions. Activities also pay rent to land and interest and profit to capital. A better name for Y is "value added". Describing income as value added emphasizes that production consists of taking inputs and transforming them into other goods, which become outputs. For instance, the food processing sector takes vegetables and cans and produces canned vegetables. The value of the canned vegetables is higher than that sum of the costs of the inputs. Value has been added, and the added value is used to pay land, labor, and capital for the work involved.

The second final expenditure of production is the import of goods from outside the reservation. This is represented by an "M" in the fourth row of the first column, a total of $24,013,000. Since the sum of expenditures and receipts by each account must be equal, the first row sum, C + I + X, must equal the sum of the first column, which is Y + M. Readers familiar with the national accounts of the United States will recognize this equation as the main accounting equation of the national accounts, which is usually written with imports moved to the other side. The two versions of this equation are as follows:

$$Y+M=C+I+X$$

or,

$$Y=C+I+X-M$$

Written as sums of thousands of dollars, the first of these two equations would look like this:

$$17{,}150+24{,}013=28{,}300+2{,}100+10{,}763$$

And the second would read as follows:

$$17{,}150=28{,}300+2{,}100+10{,}763-24{,}013.$$

The only difference from the usual statement of this equation is that governmental purchase of consumption items are classified here as part of consumption, while governmental purchases of capital goods are classified as part of investment. The national accounts of the U.S. do not distinguish these two types of government expenditure. In introductory textbooks of economics, the national income equation is written as follows:

$$Y=C+I+G+X-M$$

The difference in our equation is that the term "G"—representing governments' purchases—is omitted and included in C and I.

The second of the four sectors in this example is *institutions*. Row 2 and column 2 present income and expenditure of institutions. There are two entries in the second row. The first is the income received by institutions as a whole for the employment of resources owned by them in production, Y. As was mentioned above, this includes wages, rent, interest on capital, and profit. The other entry is "N" in the fourth column. Its numerical value is 15,400 thousand dollars. This entry represents transfers of income from sources off the reservation. Examples would be the receipt of social security payments by households, the receipt of funds to run local offices of the BIA and IHS, and the receipt of interest from savings in off-reservation banks.

The second column gives the final expenditures of institutions. There are two types of these: Consumption, "C" in row one, and saving, "S" in row three. The equation which states that the row sum and the column sum must be equal reads as follows:

$$Y+N=C+S$$

In numbers, this equation reads:

$$17{,}500+15{,}400=28{,}300+4{,}250$$

Income plus transfers from the rest-of-world equals consumption plus savings.

Suppose resident Indians number 10,000. Then *two different* per capita income figures are possible: (1) value added per capita, $1,715, and (2) value added plus transfers per capita, $3,255. These are two different concepts. The first is analogous to Gross National Product per capita in the United States. The second is close to the definition of family income used by the Census Bureau when reporting Indian income every ten years.

The reader may wonder about other expenditures of institutions. For instance, where does the payment of taxes go? The answer is that taxes go in the box at the intersection of row 2 and column 2; they are a payment from one institution to another. Therefore, they cancel each other out when we are considering "final" entries in the SAM. But they do belong in the matrix and will be discussed below under the category of "intermediate payments."

We next examine the combined capital account of institutions, which is the third sector in the 4 by 4 example. The receipts of the capital account are given in the third row. They are "S", savings, and "F", net borrowing by institutions from abroad. The expenditures of the capital account are investment only, represented by "I" in the first row of the third column. The equation for the capital account is as follows:

$$S+F=I$$

In numbers, this reads:

$$4{,}250-2{,}150=2{,}100$$

Saving plus capital outflow equals investment. In this example, there is a negative value for F. This means that those on the reservation invest more in off-reservation savings institutions than off-reservation people invest on the reservation.

The final sector is the rest-of-world account. Each of the entries in row four and column four have already been discussed. The receipts of the rest-of-world sector are imports purchased by the production sector, "M" in the first column of the fourth row. Expenditures by the rest-of-world account are purchases from production as exports, X; the transfer of funds to institutions on the reservation, N; and the net flow of lending, F, in the capital account row. The equation is as follows:

$$M=X+N+F$$

In numbers, this reads:

$$24{,}013=10{,}763+15{,}400-2{,}150$$

Imports equals the sum of exports, transfers, and capital flows. Capital flows are assumed to be negative.

We next turn to examination of the three types of *intermediate* purchases in the social accounting matrix. Table SAM-4 lists these three in symbols and table SAM-5 gives illustrative numbers. The first of these is the set of transactions between production activities, represented by the symbol "A" in Table SAM-4. No activity produces output using only land, labor, and capital; all to some extent purchase inputs from other production activities. Agriculture, for instance, purchases fertilizers, parts for equipment, and other material input which are needed to produce agricultural products. All such interindustry transactions between production activities on a reservation would enter in the "A" section of a SAM. In Table SAM-5, the value of total intermediate purchases among industries is shown by the number $1,337,000. Those familiar with economics will recognize this as the interindustry transactions in input-output models.

The second type of intermediate transactions are the ones among institutions. This is shown as "D" in table SAM-4. The total value of such transfers among institutions is given by the figure $24,470,000 in Table SAM-5. This is the second largest numerical entry in four by four example, thus illustrating the assumption that the distribution of income among institutions is a very important part of a reservation economy. For instance, the distribution of income from factor earnings (all of wages, rent and distributed profit) is contained in this number, in addition, payment of taxes to governments is included here. Welfare payments by state and federal governments are excluded, having been placed in transfers from the rest-of-world households, and included in the "N" portion of final transactions (Tables SAM-2 and SAM-3).

The third type of intermediate transaction is the flow of funds among capital accounts. This is the block labeled "L" in Table SAM-4. An example of such a flow of funds outside a reservation would be the financing of home construction by banks. Banks obtain the funds for such finance in part from the savings of consumers and in part from savings of other institutions. On some reservations, the Revolving Loan Fund finances homes using federal or tribal funds. The movement of funds from those who save to those who invest is accomplished by the banking sector, and the resulting flows are displayed in the flow of funds portion of a SAM. In the example, there is a transfer of $50,000 in the flow of funds block.

This concludes the description of the entries in a social accounting matrix. We now turn to the use of a SAM in describing the structure of the economy. Some of the important features can be shown even with a 4 by 4 SAM, which has little detail. Tables

SAM-6 and SAM-7 combine final and intermediate entries in one table.

B. ANALYSIS OF AN ECONOMY WITH A SIMPLE SAM

A SAM can be used to illustrate dependence, interdependence, and leakages. In discussing dependency, one common definition contrasts income received as a transfer to that which is earned. An institution such as a household or a government is more dependent, the greater is the proportion of its income which is received as a transfer rather than as earnings on property or skills which the institution owns. A simple measure of such dependency in the 4 by 4 example is the following ratio:

$$d = N/(Y+N)$$

Numerically, this value is

$$.47 = 15{,}400/32{,}550$$

The denominator is the total income received from all sources; the numerator is all transfer payments from off the reservation. Because all institutions are lumped together in this example, variations on this approach to measuring dependency cannot be illustrated until a SAM with more detail is presented.

Dependent should be distinguished from interdependence. Interdependence is a characteristic of the production sector. It relates the amount of imports and exports to the total value of production on a reservation. The first index would relate the level of exports to the total final expenditures on production by all accounts:

$$x = X/(C+I+X)$$

a value of

$$.26 = 10{,}763/41{,}163$$

Another ratio can be constructed using the first column rather than the first row. It gives the proportion of total final expenditures that are imports:

$$m = M/(Y+M)$$

or,

$$.58 = 24{,}013/41{,}163$$

in our example. The higher the values of x and m, the more interdependent is the economy. Small countries and small regions often are highly interdependent, while large countries and large regions are less so. A high degree of interdependence between two economies means that changes in the level of economic activity in either one will affect the other. For instance, if Indians purchase a lot in neighboring towns, a recession in the Indian economy will affect those towns. Similarly, if those towns purchase much from the reservation, a recession in the towns will affect the reservation.

A third type of measure would examine leakages. Interdependence is partly leakages. Economists usually define three types of leakages in this situation: imports, saving, and taxes. Taxes are not distinguished in the 4 by 4 example. Imports have been examined using the ratio m above. Only leakage through saving is left to examine. Leakage through savings can be examined in two ways. One can look at the ratio between the total savings of institutions and the total expenditures of institutions. This could be written as follows:

$$s=4{,}250/32{,}500=.13$$

A second measure leakage through savings could be the outflow of savings from the economy. Such leakage can be written as follows:

$$f=F/S$$

or,

$$-.51=-2{,}150/4{,}250$$

This ratio gives the proportion of total saving which is invested off the reservation.

C. A 10 BY 10 EXAMPLE OF A SAM

Table SAM-8 presents the data given in the 4 by 4 example with a greater amount of detail. Instead of one production sector, there are three production activities: agriculture, all other production, and imports. Instead of one institution, there are five: firms, households, government, labor, and property. There is still just one capital account and one rest-of-world account. The meanings of these additional entries will now be examined. The use of symbols to represent individual entries will be dropped. Instead, the symbols in Table SAM-8 will be used to refer to blocks of entries in the larger tables of this and the following section.

The "A" block.—Interindustry transactions are represented by the "A" block of entries. There are three industries illustrated: agriculture, all other, and imports. Imports is included as a type of activity in order to have all imports placed at the intersection of the production activity column and the rest-of-world row (as part of "M"). Because imports are not produced on the reservation, in this example the importing activity purchases no local inputs.

Table SAM-8

All Entries in a 10 by 10 SAM: Numbers

Expenditures (Thousands of Dollars)

	PRODUCTION			INSTITUTIONS							
	Agri (1)	Other (2)	Imports (3)	Firms (4)	Households (5)	Governments (6)	Labor (7)	Property (8)	Capital (9)	Rest of World (10)	Totals
Production											
(1) Agriculture	425	65			350				100	4460	5400
(2) All Other	245	602			2590	8660			1100	6303	19500
(3) Imports					12490	4210			900		17600
Institutions											
(4) Firms	2400	5450				100				-1000	6950
(5) Households		800			100	500	14600	400		3150	19950
(6) Governments				550	2620			800		10750	17870
(7) Labor		8500		4100						2000	14600
(8) Property				700						500	1200
(9) Capital				1600	1400	1250			50	-2150	2150
(10) Rest of World	2330	4083	17600								24013
Totals	5400	19500	17600	6950	19550	17870	14600	1200	2150	24013	

Agriculture purchases $425,000 worth of inputs from agriculture, and purchases $245,000 of inputs from all other production. All other purchases $65,000 from agriculture as inputs and purchases $602,000 of inputs from itself. These two instances of a sector purchasing from itself occur because each industry is the sum of many other activities. If a farmer makes some of his own input, that would not show up on the matrix. But if a farmer purchases inputs from a neighbor, that should show up in the matrix. For instance, a purchase of hay by a rancher would enter into the $425,000 shown as interindustry purchases of agriculture from itself.

The "C" block.—Consumption is given as five separate entries in Table SAM-8, replacing the single entry in Table SAM-5. Firms do not purchase consumption items. Households purchase $350,000 from agriculture, $2,590,000 from all other, and import $12,490,000. Governments purchase nothing from agriculture, purchase $8,660,000 from all other, and import $4,210,000. The purchase of goods and services from all other by the government includes the purchase of labor services by the government from itself as an activity. This will be explained further in the 20 by 20 example. But note that all other production purchases $8,500,000 from labor. (This is in the seventh row of the second column.) This is the employment of individuals by government.

The "I" block.—Three types of investment are distinguished in the ninth column. The capital account purchases $100,000 from agriculture, $1,100,000 from all other, and imports $900,000 worth of capital equipment.

The "X" block.—Exports consist of $4,460,000 from agriculture and $6,303,000 from all other production. This completes description of the first three rows of Table SAM-8.

The "Y" block.—Total value added is given in four entries. Firms receive $2,400,000 from agriculture and $5,450,000 from all other. Households receive $800,000 directly from all other production. Labor receives $8,500,000 from all other.

This treatment of the income section of this SAM is a bit peculiar. Most people who construct SAM's show production activities paying income directly to factors of production. All value added would show as payments to labor or to property. An alternative is to have the payments follow the route that they do in the economy, namely, as a payment from an activity to the institutions which manage the activity, which are firms, households, and governments. If one goes to the actual accounting records of institutions, one will find it easier to use the breakdown given in Table SAM-8. Economists show the payments going to factors because economists wish to be able to analyze factor markets. A change in the wage rate, for instance, would be reflected through the labor row in the value added section of a SAM. Since reservation economies are small, one can assume that factor prices are not determined by on-reservation factor markets. They are instead given by the surrounding non-Indian economy.

The "D" block.—The distribution block, which shows transfers among institutions, is the second largest block in the table. Each row gives the receipts of an institution.

The only entry in the fourth row is a subsidy of $100,000 from governments to firms. On an Indian reservation, this could be a subsidy by either the tribal or the federal government.

Households receive $100,000 in transfers from other households and $500,000 in transfer payments from governments. The $500,000 in transfer payments might be a per capita distribution by the tribal government. Households' factor income is $14,600,000 in wages and $400,000 in property income. Governments receive $550,000 from taxes paid by firms and $2,620,000 in taxes paid by individuals. On an Indian reservation, these taxes would primarily be the FICA payments for social security and income taxes on labor. Governments are also shown receiving property income, this $800,000 would represent income from the rent of tribally-owned land.

Labor receives $4,100,000 from firms and property receives $700,000 from firms. These quantities, when augmented by factor income from off the reservation, inputed rent to households, and wages paid by government industry, are transferred to households and governments within the D block as just described.

The "N" block.—Transfers from the rest-of-world are shown in the intersection of the tenth column and the fourth through eighth rows. In the fourth row, there is a transfer from the reservation to off-reservation entities of one million dollars. This may represent a payment by on-reservation firms to off-reservation people or firms for services rendered. Alternatively, if one of the tribal enterprises is a joint venture with a large corporation, the corporation's share of income and any amortization of a loan could be included in this entry. (Some who construct a SAM may prefer to put these payments in the intersection of the factor rows and the rest-of-world column.)

There is a transfer of $3,150,000 to households from off the reservation. This figure would be the sum of all transfer payments such as social security and AFDC. Even though some welfare is channeled through a local BIA office, it would be convenient in this context to show such transfers as part of the "N" block. A large net transfer of $10,750,000 is shown from the rest of rest-of-world to governments. This would represent all funds used to operate local federal offices and any grants or contracts operated by tribal government with federal funds. Tax revenues received by outside governments ($550,000 and $2,620,000) have been subtracted from what the governments' books would show.

Factors of production also receive transfers from off the reservation for services rendered. Two million dollars are shown as earnings of labor, and $500,000 as earnings from property.

The "S" block.—With firms, households, and governments all listed separately, there are three sources of savings. Firms save $1,600,000, probably as retained earnings and depreciation allowances. Households save $1,400,000 and governments save $1,250,000.

The "L" block.—The flow of funds among the capital accounts in this example would be summed to give the $50,000 shown in Table S. This is the same figure that was given in the 4 by 4 example. The 20 by 20 example has three capital accounts; the nature of the flow of funds transactions will be given then.

The "F" block.—The entry for capital flow between the on-reservation capital account and the rest-of-world account is the same as in the 4 by 4 example, an outflow of $2,150,000.

The "M" block.—Total imports of $24,013,000 are broken into three parts. Agricultural production imports $2,330,000; all other production imports $4,083,000 and direct imports by institutions total $15,600,000. One can see the origin of the demand for these imports by reading across the third row.

D. ANALYSIS OF DEPENDENCE, INTERDEPENDENCE, AND LEAKAGES

The end of the section describing the 4 by 4 example presented four ratios. The ratio d measures the dependence of institutions, x measures the export component of interdependence, m measures the import component of interdependence, and f is a measure of leakages on the capital account. Since there are more parts to the 10 by 10 example, a greater number of such ratios can be defined. Further, the usefulness of the ratios becomes more apparent.

Dependence.—For the 4 by 4 example, $d=.47$ is the ratio of off reservation transfers total income of institutions. Three parts to this ratio can be distinguished in the 10 by 10 example. For firms, define df as the ratio of transfers to total receipts as follows:

$$df=-1{,}000/6950$$

$$df=-.14$$

Since the net flow of transfers for firms is negative, firms are not dependent on off-reservations sources; they contribute to the dependence of off reservation institutions to the economy on the reservation.

The ratio dh measured the dependence of households on transfers from off the reservation. It is the ratio of such transfers to total households receipts:

$$dh=3{,}150/19.550$$

$$dh=.16$$

Some may find that this ratio is unrealistically low for an Indian reservation. The ratio df is not necessarily the one which everyone would define. In discussing dependence, some include the wages of all those working for tribal government on federally-funded projects.

The ratio dg, depicting the dependence of governments, captures this other part of dependence:

$$dg=10{,}750/17{,}870$$

$$dg=.60$$

This says that 60 total government expenditures are financed by intergovernmental transfer. Of these three institutions, governments are more dependent than households, and firms are not dependent at all.

We can also examine the dependence of factor income on employment outside of the Indian economy. Labor has a dependency ratio of .14:

$$dl = 2{,}000/14{,}600 = .14$$

Of course, some of the wages received are from employment in government jobs. One should keep that factor in mind, since such jobs account for 8,500/14,600 or 58 percent of labor income. The dependence of factor income has the ratio .42:

$$dp = 500/1{,}200 = .42$$

This high ratio is the result of leasing land to non-Indians.

Interdependence.—The two measures of interdependence, x and m can be broken down into two ratios, one for agriculture and one for all other production activities. For exports, we have the following:

$$xa = 4{,}460/5{,}400 = .83$$

and

$$xo = 6{,}303/19{,}500 = .32$$

Agriculture exports 83 percent of what it produces and all other production exports 32 percent. For imports, we have the following ratios:

$$ma = 2330/5{,}400 = .43$$

$$mo = 4{,}083/1950 = .21$$

Agriculture imports 43 percent of the value of its sales, and all other industries import 21 percent of the value of their sales. Both of these ratios are high, showing that the economy of this example is highly interdependent with the rest-of-world.

Leakages.—With the level of disaggregation available in the 10 by 10 version, it is possible to compute some measures of leakage beyond the import content of produced goods (m, ma, and mo). First, the average propensity to import is available for households and governments. For households, the value is as follows:

$$ih = 12{,}490/19{,}550 = .64$$

Households on average import 64 percent of their gross income. If one were to examine their average propensity to import out disposable income, we would have to subtract taxes before computing the ratio:

$$ihdi = 12{,}490/(19{,}550 - 2{,}620)$$

$$ihdi = 12{,}490/16{,}930$$

$$ihdi = .74$$

Households import 74 percent of the value of their disposable income. For governments, the average propensity to import is 24 percent:

$$ig = 4{,}210/17{,}870 = .24$$

Another component of leakages is saving. With this level of detail, one can examine average propensities to save. Three values exist, one for each institution. For firms, the value is

$$sf = 1{,}600/6{,}950 = .23$$

For households, the value is

$$sh = 1{,}400/19{,}550 = .072$$

and for governments, the value is

$$sg = 1{,}250/17{,}870 = .070$$

Firms retain much of their earnings. But both households and governments save a small percentage of their available funds.

Uses of the ratios.—These ratios can serve to give insight into the behavior of a reservation economy. Reservations with high leakages would not experience large multiplier effects when there is an injection of expenditures. Reservations that do not have high rates of interdependence with surrounding economy would be insulated both from booms and busts in that economy. Dependence may have effects in the political and social institutions, independent of strictly economic effects.

E. A 20 BY 20 EXAMPLE OF A SAM

The third example presented here adds more detail to the two examples already presented. This detail is needed to make the example more realistic and to show more about how a SAM might be set up. In particular, it is important to increase the number of industries. The previous example uses agriculture, all other, and imports. This example subdivides the all other category into five parts, including a smaller "all other" category. A manufacturing sector is assumed. Examples of manufacturing activities are construction, sawmills, food processing, and assembling electronic components. A housing sector is included because housing is such an important part of the consumption of goods and services by households. A mining sector is included; this sector has few connections with other parts of the economy; it is an "enclave" that exports its output and purchases most of its inputs from off the reservation. A government industry is added to deal with the employment of people by governments; the reason for this approach is explained below. Finally, another "all other" category is used. In this example, this category is mostly services: repair of equipment, wholesale and retail trade, eating and lodging places, business services, and banking are examples.

Other parts of the table are also expanded. Tribal and federal governments are distinguished. Tribal enterprises and private Indian enterprises are each shown. Self-employed workers are separated from all other workers. The capital account is broken into three parts.

In summary, the 10 by 10 version is expanded by making the following changes:

(1) Seven rather than three production activities are shown by splitting "all other" into five parts;

(2) Firms are divided into private and tribal;

(3) Federal and Tribal governments are distinguished;

(4) Labor is divided into two types: wages and salaries and self-employment income;

(5) Property is divided into individually owned property and tribally-owned property; and

(6) Separate capital accounts are shown for firms, households, and governments.

We now go through the larger matrix entry by entry beginning with the A block. The figures are in Table SAM-9.

The A block: Interindustry purchases of goods and services.—The 5 by 5 block of entries where rows 1-5 intersect columns 1-5 show the interindustry purchases on the reservation. Row 1 shows in column 1 that agricultural activities purchased $425,000 of agricultural products from other activities, the same as in the previous example. Cattle would contribute to this exchange, for example agriculture sold $2,000 worth of products to manufacturing, $52,000 to housing, and $11,000 to other production.

Table SAM-9

All Entries in a 20 by 20 SAM: Numbers

		PRODUCTION ACTIVITIES							INSTITUTIONS									CAPITAL					
									FIRMS			GOV'TS		FACTORS									
		Agri. (1)	Mining (2)	Mfg. (3)	Housing (4)	Other (5)	Gov't Ind. (6)	Impts (7)	Prvt (8)	Trib (9)	H'hlds (10)	Fed. (11)	Trib (12)	Labor (13)	S-Empl (14)	Priv (15)	Trib (16)	Firms (17)	H'hlds (18)	Gov't (19)	Rest of World (20)	TOTAL	
	PRODUCTION																						
(1)	AGRICUL.	425		2	52	11					350							100			4460	5400	(1)
(2)	MINING			10														50			5500	5600	(2)
(3)	MFTG.	190	100	128	100	25					150	50	20					160	590	300	187	2000	(3)
(4)	HOUSING	5		18	20	4					2200										593	2840	(4)
(5)	OTHER	50	140	25	22	10					240	60	30								23	600	(5)
(6)	GOV'T IND.											5500	3000									8500	(6)
(7)	IMPORTS										12490	3140	1070					900				17600	(7)
	INST.																						
	FIRMS																						
(8)	Private	1500	1460	600	250	300																4110	(8)
(9)	Tribal	900	1800	300	740								100								-1000	2840	(9)
(10)	HOUSEHOLDS				800						100		500	14000	600	200	200				3150	19550	(10)
	GOVERNMENT																						
(11)	Federal								300	200	2620										5880	9000	(11)
(12)	Tribal								10	40							800				4870	5720	(12)
	FACTORS																						
(13)	Labor						8500		2500	1000											2000	14000	(13)
(14)	S-Empl.								600													600	(14)
(15)	Prvt. Cp.& Ld.								200													200	(15)
(16)	Trbl. Cp.& Ld.									500											500	1000	(16)
	CAP. ACCTS.																						
(17)	FIRMS								500	1100										10	-400	1210	(17)
(18)	HOUSEHOLDS										1400									40	-850	590	(18)
(19)	GOVERNMENT											250	1000								-900	350	(19)
(20)	REST-OF-WORLD	2330	2060	917	856	250		17600														24013	(20)
	TOTALS	5400	5560	2000	2840	600	8500	17600	4110	2840	19550	9000	5720	14000	600	200	1000	1210	590	350	24013		

The second row shows that mining sells only to manufacturing on the reservation. (Mining also purchases very few items from other industries the reservation, as is shown in column 2.)

The third row shows sales of manufacturing activities to other activities on the reservation. Mining has inputs into itself and all the other production activities. For instance, manufacturing sells $190,000 of products to the agricultural activities on the reservation, $100,000 to the mining activities, $100,000 to housing, and $25,000 to other activities.

Sales of the housing sector (row 4) are small to each of the other production activities, representing offices. The other sector (row 5) also sells a modest amount to all but the mining sector.

The interindustry transactions represent the *input-output* portion of a Social Accounting Matrix. If one divides a column entry in the interindustry transactions matrix by the total value of output for the column, one obtains the "dollar amount of input of industry x than is needed to produce a dollar of output of industry y." This can be demonstrated with the manufacturing industry, which is column 3. Manufacturing produced $2,000,000 worth of output. The value of output can be read from either the column sum or the row sum for manufacturing. Since manufacturing purchased $2,000 worth of agricultural output, one can say that $.001 of agricultural output was needed to produce $1.00 of manufactured goods. The number .001 was obtained by dividing $2,000 by $2,000,000.

Special industries.—Two special industries have been created in order to deal with government employment and with imports. This follows the practice used in setting up the input-output tables of the United States. "Government industry," the sixth row and column, does one thing: it employs government workers. Its only entries occur in the consumption block (C) for its sales and in the value added (Y) block for payment of wages and salaries. All purchases of goods and services by government for purposes other than investment are classified as part of C. Therefore, government industry has no purchases of intermediate inputs.

A second special industry is "imports." It is in row 7 and column 7. This industry sells to final demand either for consumption (C) or investment (I). Its only purchase is imports in row 20 of column 7.[2]

The C block.—The consumption to block now has three columns, one for households and two for governments. It has seven rows, five for production activities and two for special industries.

Consumption final demand.—Entries (1, 10), (3, 10), (4, 10), and (5, 10) give the components of consumption by households of products produced on the reservation. Entry (1, 10) is the purchase of food and agricultural produce. There is no consumption of the mining sector's output by Indian households. Indian households purchase $150,000 worth of manufactured goods from the reservation. Housing accounts for $2,200,000 in expenditures; $800,000 of this is the imputed rent of owner-occupied housing. The rest, therefore, is the expenditures for rental units for other components of the production of housing services. Finally, a total of $240,000 is purchased from the "other" sector.

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[2] In this social accounting matrix, the interindustry transactions are treated in the interregional rather than the multiregional style of input-output analysis. The distinction between these two ways is in the treatment of imported inputs. In this example, all purchases of goods from off the reservation by productive activities are treated as imports in the rest-of-world row, row 20. An alternative would be to create a column and a row for the import of each type of good, which then would be sold by the importing activity to either interindustry purchases or to final demand.

Although these entries account for all household expenditures for products of the reservation, by far the greatest proportion of consumer expenditure is for imports, which are in position (7, 10). Households purchased a total of $12,490,000 in goods and services produced off the reservation. These purchases are the major source of leakage from the reservation economy to the rest-of-the-world economy.

Government purchases of goods.—The intersection of rows 1-7 and columns 11 and 12 give the purchases of goods and services by the two governments on the reservation. The federal government is assumed to purchase $50,000 of manufactured products and $60,000 from the other category. Tribal government purchases $20,000 of manufactured goods and $30,000 from all other production activities.

The payroll for on-reservation employment by the federal government (entry 6, 11) is $5,500,000. The payroll for tribal government is $3,000,000 in entry (6, 12). Entry (7, 11) shows the offices of the federal government purchased a total of $3,140,000 worth of goods and services from suppliers not part of the tribal economy. Entry (7, 12) shows the tribal government purchased $1,070,000 worth of imported goods and services.

The I block: Investment.—Columns 17 to 19 show the purchase of goods for the purpose of investment. Entry (1, 17) states that $100,000 worth of the products of the agricultural sector were used in investment. The investment could be change in investories. Entry (2, 17) says that firms purchased $50,000 worth of the products of mining as investment.

Most investment demand is for manufacturing output by each of the three sources of investment demand. Firms purchased $160,000 of manufactured goods for investment; see entry (3, 17). Households purchased $590,000 for investment. Since the construction sector has been classed in the manufacturing sector, this investment is mostly the construction of new houses. The government purchased $300,000 worth of goods for investment, shown in entry (3, 19). Firms purchased a total of $900,000 worth of equipment and other capital goods from off the reservation, as shown by the entry in row 7, column 17.

The X block: Exports.—The intersection of rows 1-5 and column 20 gives the amount of exports for each production activity. Agriculture exported $4,460,000; mining exported $5,500,000; manufacturing exported $187,000; housing exported $593,000; and other activities exported $23,000.

Total gross demand.—The final column gives the total demand for each product on the reservation. The demand is called "gross" demand to emphasize that interindustry purchases are included and imports are not subtracted. For each of the production activities in rows 1 through 5, the components of gross demand are interindustry purchases (columns 1-5), consumption (column 10), government purchases (columns 11 and 12), investment (columns 17, 18, and 19), exports (column 20). The sum of all sources of demand for each production activity is the total of all receipts of the activity.

Receipts by institutions.—With the eighth row, we move into a different section of the table, the set of rows that show the receipts of institutions. These receipts come from factors of production owned by institutions, from other institutions, and from production of goods and services. The entries are classified into the Y, D, and N blocks.

The Y block.—Contrary to usual practice, in the value added block the example shows the value added going directly into the account for firms. It subsequently goes to factors of production, taxes, and households in the D block. This example was created this way for three reasons. (1) It seemed easier to explain, if the SAM categories would follow the accounting records of the economy, which show value added going to firms before factors of production. (2) Taxes on firms appear in one place, as a payment by firms to government, rather than being divided into direct and indirect taxes as is normally done. (3) This practice emphasizes the flexibility of the SAM approach.

Row 8 has the following entries:

(8,1) Agricultural production pays $1,500,000 in value added to private Indian-owned enterprises.

(8,2) Private Indian-run enterprises on the reservation earn $1,460,000 in value added in production related to mining. The imaginary reservation has a mining sector which employs Indians in part of the extraction of the mineral (or timber). An example would be the operation of trucks for transportation of the goods which is mined.

(8,3) There is $600,000 of value added in the manufacturing sector which is created in Indian-owned enterprise.

(8,4) Some of the housing on the reservation is rented from one person to another; the value added portion of the rental cost is included in the $250,000 in this position.

(8,5) All other enterprise produces $300,000 in value added in Indian enterprises. Examples such as smokeshops, repair services, and other services and trade would be in this category.

The next row shows the sources of income for tribal enterprises. These entries are as follows:

(9,1) One or more of the tribal enterprises is engaged in agriculture; the enterprise(s) created $900,000 in value added. One of these enterprises could be merely occupied with leasing land, in which case all the value added consists of rental income.

(9,2) The tribal enterprise that consists of leasing land that supports a mine earned $1,800,000 in value added.

(9,3) A tribal enterprise engaged in manufacturing earned $300,000 in value added.

(9,4) A tribal enterprise providing housing received $740,000 (after expenses) in rental of housing or other buildings.

(9,12) There is a transfer of $100,000 from the tribal government to a tribal enterprise. It could mean that the tribal government covered a loss in such an enterprise. The books of the tribal enterprise would show the transfer of funds, probably counting the tribal contribution as an increase in the equity share of the tribal government.

Two entries remain in the Y block. Households receive $800,000 from the housing activity. This represents imputed rent on owner-occupied dwellings. Since the GNP accounts of the United States count such rent as part of national income, it seemed appropriate to demonstrate this practice in this imaginary SAM. The final entry of $8,500,000 is payment of wages to labor by the government industry, entry (13,6).

The D block.—The distribution block takes value added (Y) and transfers from the rest-of-the-world (N) and allocates them to factors, households, and governments. One purpose of this block is to show how income which is earned on the reservation is distributed to people and governments. A further purpose is to show the source of all revenue for each of the important institutions on the reservation.

We now turn to the row which shows the sources of income for all households on the reservation. With the exception of the imputed rental value of housing, all receipts from households come from either payments to factors of production owned by the households or from other institutions.

(10,10) There is a transfer of $100,000 between households. This figure would represent support paid to one household by another. This figure would be difficult to estimate reliably without a careful survey.

(10,12) The transfers paid out of tribal receipts total $500,000. This entry assumes that there are some tribally-run transfer programs. Although one could enter a per capita payment here, a better place is in entry (10,16), receipts from tribal property paid to households. The ultimate source of funds for such programs needs to be traced back through the sources of income of the tribal government, which is row 12.

(10,13) Total wages and salaries received by Indians is $14,000,000. This is the largest single source of income.

(10,14) Self-employment earnings are $600,000; this is exactly equal to the entire row (14).

(10,15) Rental of privately owned capital and land causes the receipt of $200,000. The components of this figure can be seen by reading across row (15). This income would include all receipts for the leasing of allotted land.

(10,16) This tribe makes an annual per capita payment to tribal members which totals $200,000 for those residing on the reservation.

(10,20) The $3,150,000 consists of all transfer payments from the federal government to Indian households. This would include all social security, railroad retirement, AFDC, and food stamps. It is the sum of social insurance and welfare payments. Although some of these are channeled through the local BIA office, they are entered here as a transfer directly to households.

Row 11 lists the sources of revenue for the local offices of the federal government. There are as follows:

(11,8) Private firms on the reservation pay a total of $300,000 in taxes to the federal government. These would be corporate income taxes, excise taxes, and the employer's share of social security taxes.

(11,9) Payments by tribal enterprise to the federal government could arise from two sources. One would be an employer's share of social security taxes. Another would be fees on management of tribal activities. (For instance, some tribes pay a 10 percent management fee in forestry.)

(11,10) Households on the reservation are assumed to pay $2,620,000 in personal income taxes to the federal government.

(11,20) The federal government transfers a total of $5,880,000 to the reservation to pay for governmental services. These funds are used to pay Indians who work for the federal government on the reservation and to purchase materials used in the government's offices. This inflow of money is usually placed as in inflow on the capital account of a country. By analogy to underdeveloped countries, the inflow of funds is treated as if it were "foreign aid." Data for this entry should be readily available from the offices of the federal government.

The twelfth row of the table gives the sources of income for the tribal government.

(12,8) Payments of $10,000 by Indian entrepreneurs to the tribal government would be things such as license fees for doing business, a tax on cigarettes or other retail sales.

(12,9) It is also asserted that tribal enterprises pay the tribal government an additional $40,000 which is paid to the government as a *tax* rather than as a payment for the use of tribally-owned capital or tribally-owned land. These payments should be available from the revenue statement of the tribal government.

(12,16) The tribal enterprises pay a total of $800,000 to the tribal government. These payments might be the value of stumpage, the royalties from leasing land to outsiders, or any other type of payment that is either rent on land or return on equity which is paid to the tribal government as an owner of the resource. Data for this entry should be available both on the books of tribal enterprises and on the budget of the tribal government.

(12,20) Since the federal government channels some monies directly to tribal governments, $4,870,000 has been included in this example as another type of "foreign aid." This aid goes directly to the tribal government, not to the local offices of the federal government. One could, alternatively, channel the money through the federal government in row 11, and then place this entry in box (12,11), which is now empty. The types of payments here are revenue sharing funds, any EDA, HUD, or other non-BIA or IHS funds that are transferred to the reservation to run programs in the tribal government, and Public Law-638 contract moneys. Data for this entry would come from the revenue statement of the tribal government or its divisions.

Factor receipts.—The thirteenth row shows the sources of wages that are paid to Indian workers on the reservation. Entry (13,6) is wages paid by federal and tribal government offices. Position (13,8) is wages paid by private Indian-owned firms. Entry (13,9) is wages paid by tribal enterprises. Entry (13,20) is wages earned by Indians working for institutions that are not part of the reservation economy.

The next row is for income earned by persons employing themselves; for these people, one cannot divide their earnings into wages and profit. Examples are farmers, ranchers, owners of small retail stores such as smokeshops. The only entry in the row is for the column corresponding to private Indian-owned firms; the entry of $600,000 is the net cash flow received by the Indian owners of these enterprises.

The fifteenth row is the earnings of capital and land that are owned by individual Indians. There is one entry, for $200,000. Entry (15,8) is the earnings arising from leasing of land between individual Indians. A rancher or farmer leasing an allotment would pay another Indian for use of the land.

The sixteenth row has two entries. First is the payment by tribal enterprises of rent to tribally-owned land. Snce the activity of leasing land to non-Indian corporations is classified under tribal enterprise in this table, the $500,000 in position (16,9) includes any mineral royalties paid to the tribal government from the mining operation. The entry in (16,20) represents the rent of leased agricultural land to non-Indian farmers or ranchers.

Total receipts by institutions.—Before turning to the capital accounts, it is useful to summarize this presentation of receipts by institutions by calling attention to the difference between value added and received income. The difference corresponds partly to the difference between National Income measured by the GNP accounts and household income measured by the Bureau of the Census. The GNP accounts examine only value added; therefore, only block Y would count as income. But the Census Bureau asks households what their money receipts are. Transfers, therefore, are counted. The difference can be substantial. This distinction is particularly important for Indian reservations.

The capital accounts: Blocks S, L, and F.—Rows 17, 18, and 19 give the receipts of each capital account. These rows and their corresponding columns are used to show how investment on the reservation is financed. The source of investment funds is the S or F block. Any transfer of funds from one capital account to another occurs in the L block. Row 17 shows that private firms retained $500,000 for investment and tribal enterprises reserved $1,100,000. These retained earnings would go for both the maintenance of capital value through the use of depreciation allowances and for the purchases of new equipment. Also increases in inventories would be saving as long as the inventoried goods are reservation products, as accounted for in column 17.

In examining the capital account, it is useful to distinguish between purchase of on-reservation products, purchase of off-reservation products, and accumulation of monetary assets. In this social accounting matrix, all saving that is not purchases of goods is assumed to take the form of the accumulation of monetary assets in the rest-of-the-world. Take households, for instance. Their total savings of $1,400,000 is given by the entry in row 18, column 10. They also receive $40,000 from the governments' capital account. Their purchase of houses was $590,000 as shown in entry (3,18). (Note that the building of houses is done by manufacturing. The output of the housing activity is shelter, which is a consumption, not an investment item.) The households' remaining saving, $850,000, is assumed to be deposited in a savings account in a bank, or applied to investment in bonds of corporations in the United States. The sum is entered as a negative entry in the rest-of-the-world column and the household saving row (the entry in column 20 and row 18).

Row 19 gives the saving activity of government. Government investment must show up in this row as saving. For instance, suppose the federal government builds a structure from on-reservation construction activity. The purchase would be shown in the "I" block as an investment. The money for the purchase would be shown in the federal government's part of the "S" block. In this example, it is assumed that the federal government invested $250,000. Entry 19,11 gives the amount of purchases of reservation products by the federal government. In this case, the saving is equal to investment because the federal government does not set aside funds beyond the purchase of goods for investment purposes. The tribal government saves $1,000,000 [entry (19,12)]. Purchases of government securities by the tribal government is entered as an outflow of funds on the rest-of-the-world capital account. In this example, it is assumed that the tribal government invested $900,000 in securities—probably through the operation of the Albuquerque office of the BIA. The entry is in row 19, column 20. The remaining $100,000 goes for three purposes. One is investment of $50,000; this shows up in entry (3,19). When combined with the federal government's investment, total on-reservation purchase of investment goods is $300,000. The remaining $50,000 is transferred to other sectors in the flow of funds portion of the matrix, to which we now turn.

The "L" block.—There are two entries in the L Block. Both are transfers from the tribal government. The tribal government is assumed to invest $10,000 in tribal enterprises. It also increases its credit to the household sector by $40,000. This might represent further contributions to a revolving loan fund that finances home construction by households.

The F block.—Although the entries of the F block have been discussed above, they are reviewed here:

(17,20) Private firms on the reservation took $400,000 of their receipts and transferred them off the reservation, presumably as investment. But part of this outflow of funds on the rest-of-the-world capital account would include the repayment of loans from financial institutions off the reservation.

(18,20) Households transferred $850,000 to the rest-of-the-world. This figure would be the net change in savings accounts, credit accounts, and other financial holdings, plus the payment of interest on any debt. Should tribal members have VISA or MASTER CARD accounts, the interest charged on those accounts would enter as an outflow of capital from the household sector.

(19,20) Tribal government is assumed to have transferred $900,000 to the rest of the world. This appears to be a thrifty tribal government, which builds up assets in the rest-of-the-world.

Receipts of the rest-of-the-world: The M block.—Row 20 gives the receipts of the rest-of-the-world, which is the economy of the United States and any other economy from which the reservation economy purchases goods and services. This row consists entirely of imported goods and services. Other receipts of the rest-of-the-world are treated as negative entries in column 20. The entries in row 20 are as follows:

(20,1) The agricultural production activity purchased $2,330,000 worth of goods to be used in the production of agricultural products on the reservation.

(20,2) The mining activity purchased $2,060,000 worth of goods and services from the rest-of-the-world.

(20,3) The manufacturing activities purchased $917,000 worth of imports.

(20,4) The housing activity purchased $856,000 worth of goods from the rest-of-the-world. Much of this would be the purchase of energy for heating buildings.

(20,5) All other production activities used a total of $250,000 in their production of goods and of services.

(20,7) Imports of all goods which go directly to final demand are summed across row 7 and entered here as imports purchased by the special activity, "direct imports." The imports total $17,600,000.

F. RELATIONSHIPS BETWEEN A SAM AND OTHER ECONOMIC DEVELOPMENT ISSUES

A social accounting matrix reveals a picture of economic transactions during a particular year. It should record what did occur, and can include non-cash transacti[illegible] data are available. But a SAM surely is not the whole story of a reservation economy. The purpose of this section is to go through a list of economic development issues and relate them to the SAM idea. The following are important economic development issues that should be considered: (1) unemployment, (2) trust responsibility, (3) modern vs. traditional leasing practices, (4) leakages, (5) lack of capital structure, and (6) dependence.

Unemployment

Most Indian reservations have very high rates of unemployment. Many potential workers are so discouraged that they have stopped looking for work. How would a SAM reveal this situation? The first answer is that unemployed resources, such as labor, land or capital, are absent from a SAM because they are not earning money or goods. Since a SAM records transactions, it cannot reveal unemployment. Also, the SAM does not indicate things such as the fundamental causes of unemployment. Such causes may be inappropriate training, discrimination in local labor markets, and insufficient investment in productive enterprises.

The unemployment issue, however, can be explored using a SAM. Ask this question: If jobs are created for some additional workers, what will happen to the structure of the reservation economy? Or, ask this question: If some people lose their jobs, what will happen to the reservation economy? Both of these questions involve changes in the transactions in the economy. These changes can be examined with a SAM.

For instance, consider an increase in employment. This would mean more income for households. Households purchase goods on the reservation, import goods, pay taxes, and save. Receipt of wages may also reduce transfer payments. An increase in employment will lead to changes in the household row and the household column of a SAM. Such changes will cause changes in other parts of the SAM. The purchase of additional reservation-produced goods will increase output of local production, which will cause further increases in income or jobs. An increase in imported goods, by stimulating local non-Indian business may also feed back to the reservation as an increase in the demand for exports.

An important point is that the SAM itself does not explain how these roundabout effects between different parts of the SAM will occur. One can assume as a rough first approximation that changes will be proportional, using the ratios in the given data as guides. But the changes may not be proportional, requiring other information. The SAM provides direction as one looks for this other information. If the income of households increases, this causes one to look at the increase in consumption by households. Such an increase in demand requires that one look at the inputs used to provide the additional goods. The SAM, therefore, provides guidance in formulation of questions about the impact of a change in unemployment rates.

Trust responsibility

One aspect of the federal government's trust responsibility is that it protect or enhance the value of reservation resources. Since the federal government has been lax in upholding this responsibility, it is quite possible that the income from reservation resources is lower than it should be. A SAM will record existing income from resources. But it will not tell what the income *should be.* Another part of the trust responsibility is the provision of services to make up for unfair treatment in the past. This "welfare" interpretation forces us to examine in-kind support. The federal government provides medical care and commodities, for instance. These in-kind transactions should be recorded in a social accounting matrix in the appropriate boxes. In row 10 and column 20 we find the value of transfers to households. This entry should include the value of in-kind aid as well as cash aid. If the two should be distinguished, then a separate column and row might be added to the SAM to accommodate noncash transactions of this sort.

Modern vs. traditional leasing practices

Many people have emphasized in recent years that the traditional practice of leasing Indian land at low rates to non-Indians is not wise. More is involved than receipt of low levels of rent. Questions of the structure of development and the control over development in Indian leadership must be considered. How does this issue relate to a SAM? One answer is that some of the institutional development which would accompany a joint venture, for instance, would not show up in a SAM because it is not a monetary transaction.

But a comparison of the manner in which each type of lease would affect a SAM does show that differences can be seen. For instance, compare the ninth and the sixteenth rows of the 20 by 20 example. The ninth row gives receipts of tribal enterprises. It shows that such enterprises receive a substantial share of value added in many production activities. In addition, tribal enterprise pays $1,000,000 to off-reservation institutions. This entry could represent an energy company's share of the profits in a joint venture. It could also be the management fee for a service contract. The payment shows that an off-reservation entity or entities are dependent on reservation enterprise.

The sixteenth row shows the receipts of tribal land. One-half of these receipts come from off-reservation. This is the traditional lease in operation. There is no involvement of tribal enterprise in receiving the value added and passing it along to employees or to a partner in a joint venture. Rather, there is a transfer from rest-of-world in the tribal land row. The contrast between the ninth and sixteenth rows, therefore, indicates the difference between a modern resource concession and a traditional resource concession; it is the difference between a joint venture and a lease.

Leakages

There are two issues ragarding leakages: (1) what are the leakages? (2) Why are these leakages great? A SAM is a good tool for answering the first question. It does not answer the second question, which is more complex. For instance, why do households import much? The causes of such imports are the desires of consumers and the potential sources of the goods. To understand household importing behavior, therefore, one must understand the nature of the demand and particular goods, and the reasons that such goods are not produced on the reservation. Neither question is easy to answer. Policies aimed at reducing such leakages would need to determine those answers in order to be effective. .

Lack of capital structure

Rows 17 through 18 of the 20 by 20 example show an outflow of savings from the imaginary reservation. A cause for this outflow may be a lack of banking institutions on the reservation to allow investors the return they desire for their funds. Thus, it may be possible for SAM to record the evidence of a problem. But it does not tell us the cause of the problem. Savings institutions may be absent from a reservation for a variety of reasons. There may be a problem in scale; the reservation economy may be too small. There may be a jurisdictional problem; no government has set up the legal background required to operate a savings institution. There may be unfavorable policies pursued by the federal government through the Bureau of Indian Affairs. In addition to not showing why there is an outflow of savings, a SAM cannot show the consequences of reversing that flow without additional information. For instance, investment on the reservation may expand job opportunities. In order to chart the effects of such a development, one would need to know what the new enterprise will produce, whom it will employ, what inputs it will use, and where it will sell its output. As with dealing with unemployment, a SAM is only part of the story.

Dependence

What is the proper definition of dependence? Is it an economic, political, or sociological term? The illustrative SAM provides some ratios which may measure economic dependence. But political or social dependence are different, institutional, issues.

Economic dependence occurs when a reservation institution or group of institutions depend upon income that comes from outside. This income may be in cash or in kind. The higher the proportion of outside support, the greater the dependence.

Political dependence may partly follow from economic dependence. A government which relies upon intergovernmental transfer is subject to some control by the source of the funds. State, city, and county governments share this problem with tribal government. But tribal government has an additional problem that differentiates it from others. Tribal government must deal with colonial regulations. The Bureau of Indian Affairs is in the position of having veto power over certain law-making powers of tribal government. This is an institutional dimension which cannot be dealt with by an accounting system whose primary focus is on numbers.

Indian society also experiences possible dependence in the social area. American culture has a variety of ways to impose its practices and its information systems upon Indians. Indian children attend non-Indian schools, and receive influence which may undercut or weaken family ties. Television portrays particular goals and means of achieving them. Newspapers and magazines project particular images of Indians. All of these factors may contribute to forms of dependence which are difficult for economists and the tools of economists to handle.

G. CONCLUSION

The previous section has stressed both some of the strengths and some of the weaknesses of a Social Accounting Matrix as a method of analyzing the structure of an economy. One main benefit of constructing a SAM is that it will show the relationships between the reservation economy and the outside economy. The example provided in this chapter would be improved if the "rest-of-world" sector were divided into several parts. One of these would be non-Indian enterprise within the boundaries of the reservation. The example shows that Indian households consume $12,490,000 worth of goods that are imported. Many of these may be imported from neighboring non-Indians. Federal and Tribal governments also import considerable amounts. These imports are leakages from the tribal economy, but they are valuable injections for the neighboring economy.

Another benefit of constructing a SAM is that the degree of dependence of different institutions on outside sources of income can be revealed. Transfers to households and to tribal governments show up clearly in the rest-of-world column. The ratio of these transfers to total receipts give a measure of dependence. In addition, examination of the uses of income by these institutions can be quite revealing. Transfers to Indians can flow through the Indian economy by moving from Indians to neighbors through imports. This is the phenomenon which Ahemd Kooros calls "dependence for the sake of leakages." Indians are stigmatized for receiving transfers, but non-Indians receive much benefit from such activities as constructing homes, selling food, and clothing, and so forth. Evidence on such interdependence between a tribe and its neighbors can be used to good effect by tribal leaders in their political activities.

A SAM can also be used for economic planning. New projects can be evaluated to see if they improve tribal self-sufficiency. Increases in exports, a shift in consumption from imports to tribally-produced goods, replacement of transfers from the rest-of-world by factor incomes from on-reservation activity, and increases in the dependence of the rest-of-world on tribal activity might all be regarded as beneficial changes in the structure of a reservation economy. The following two chapters show how a SAM might be used to estimate the impact of a project. The effects of the agricultural project in Chapter 4 will be shown using the 10 by 10 example. The effects of the manufacturing project in Chapter 5 will be shown using the 20 by 20 example.

CHAPTER III—AN AGRICULTURAL PROJECT

This is the first of three chapters which present examples of the application of social cost-benefit analysis. This chapter begins with a brief review of the principles of private discounted cash flow analysis and the ways in which a private analysis of a capital investment decision can be transformed into a social analysis. It then goes on to present a fictitious example of an agricultural project. After completing the discounted cash flow analysis, a few remarks about institutional analysis are presented. Then the impacts of the project on a reservation's economy are calculated using the 10 by 10 social accounting matrix presented in Chapter 3. Chapter 4 presents an analysis of a manufacturing project, and Chapter 5 deals with a mining project. The first part of Chapter 6 compares the three projects.

A. SOCIAL DISCOUNTED CASH FLOW ANALYSIS

Social cost-benefit analysis is the application of discounted cash flow analysis in the public rather than the private sector. This section will review the concepts used in discounted cash flow analysis. A small example is given which shows both a private and a social computation. The purpose is *not* to provide a comprehensive introduction to the entire field of cost-benefit analysis, which is available in other books.[1] Rather, this brief introduction is intended to refresh the memory of those who have studied the topic before and to provide readers new to the subject with the basic definitions. The example illustrates the arithmetic of discounted cash flow from a private and a social point of view.

The private point of view uses market prices to compute costs and benefits. The social point of view uses shadow prices to compute costs and benefits. Shadow prices may equal or differ from market prices depending upon circumstances.

For both private and social calculations of the value of an investment, capital costs which occur early in a project must be compared to benefits which occur later. This comparison involves use of an interest rate or a discount rate. The purpose is to compare each investment to the same standard. For a tribal analysis, the rate of interest earned on investments of tribal trust funds through the Bureau of Indian Affairs' Albuquerque Office might be a reasonable standard to apply. The reason is that such investment is always an alternative to investing in a project on the reservation.

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[1] Bierman and Smidt (1915) and Clark, Hindelang and Pritchard (1979) are two of many books that explain private discounted cash flow analysis and the larger topic, capital budgeting. Thompson (1980) and Granelich (1981) are two recent books on social capital budgeting; both have numerous examples. Keeney and Raiffa (1975) give ways to deal with difficult choices in which monetary values are not sufficient. Two older books and one collection of articles on key controversies are Little and Mirrlees (1974), Dasgupta, Sen, and Marglin (1972), and Layard (1974).

That interest rate would have to be adjusted downward by anticipated inflation if all other data is in constant prices.

The formula for a present discounted value calculation is the following:

$$NPV = CF_0 + \frac{CF_1}{(1+r)^1} + \frac{CF_2}{(1+r)^2} + \ldots + \frac{CF_T}{(1+r)^T} + \frac{FV}{(1+r)^T}$$

Where

NPV = net present value of the project.
CF_0 = cash flow in the base period, usually part or all of the capital cost of the project.
CF_1 to CF = the cash flow in each of the years of the project.
T = the total number of years of the project, not counting the base year.
r = the interest rate.
FV = any final or salvage value which is earned in addition to the cash flow of the project in the last year of the project.

The net cash flow of a project is the difference between the revenues earned from a project and the costs in each of the years of the project. If a project takes several years to build, then there is a negative cash flow in each of the construction years to represent the capital cost.

Table EX-1 gives data for a three period example which illustrates this formula. Suppose the project is a boat rental business on a river. The investment costs $150,000 and generates the following data for each of three years based on market prices. Revenues total $200,000 a year. Land must be rented for $20,000 a year, labor must be employed at a cost of $120,000 per year, and additional materials worth $4,000 a year must be consumed. The net cash flow for each year is therefore $56,000 per year. The scrap value of the capital equipment at the end of the third year is $10,000. As shown in the table, application of the discounted cash flow formula gives a positive net present value of $11,140. This means that the project is better than investing the money at an interest rate of 5 percent per year.

Table EX-1

Private Discounted Cash Flow for a Small Example

A. DATA

Initial Capital Cost		$150,000
Annual Sales Revenue		200,000
Annual Costs to Production, Market Prices		144,000
Rent	$ 20,000	
Wages	120,000	
Materials	4,000	
Annual Cash Flow		56,000
Scrap Value		10,000

B. CALCULATION

CF_0 = -150,000

CF_1 = 56,000

CF_2 = 56,000

CF_3 = 56,000

FV = 10,000

r = .05

$$NPV = -CF_0 = \frac{CF_1}{1+r} + \frac{CF_2}{(1+r)^2} + \frac{CF_3}{(1+r)^3} + \frac{FV}{(1.03)^2}$$

$$NPV = 150,000 + \frac{56,000}{1.05} + \frac{56,000}{1.1025} + \frac{56,000}{1.157625} + \frac{10,000}{1.157625}$$

$$NPV = 150,000 + 53,333 + 50,794 + 48,375 + 8,638$$

$$NPV = 11,140$$

Now suppose that the data for the example would be changed if social values were taken into account. If this is a project using a river for recreation purposes, then one easily imagines that such a project might have effects outside of the costs and benefits which are realized in monetary form by the boating project itself. Assume that the presence of recreational boaters decreases the number of fish caught by tribal members, decreases the enjoyment which tribal members receive from using the stream, and that the monetary value of these losses to tribal members total $41,000 per year. Assume that the project increases the income of workers on the reservation by $50,000. Before the project, total income of the workers from other work and from welfare was $70,000. With the project, the income of the workers rises to $120,000.

These assumptions mean that to perform a social cost benefit analysis, the annual cash flow must be recalculated taking the social costs and benefits into account. The market price of the congestion costs—the lost fish and recreation enjoyment—was zero, since the operator of the boating project did not pay for them. But the shadow price of them is $41,000. For wages, the market price is $120,000, which is what the operator pays his workers. But the shadow wage cost is only $70,000 since that is the previous income received by the workers. As constructed, this project provides employment benefits while imposing environmental costs.

Table EX-2 applies the net present value formula to the project when shadow prices are used. Since no adjustments were made to the revenues, the market price is the shadow price, and revenues remain at $200,000. Total costs change, however. Land rental remains at the market rate. Wage costs are given a shadow wage that is $70,000.[2] Materials remain at the same level. But an additional cost of $41,000 is charged for environmental losses. The result is that annual costs for this example fall to $135,000. The net cash flow for each of the three years of the project rise from $56,000 to $65,000. Applying the formula, the net present value of the project when shadow prices are used rises to $35,649.

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[2] The usual practice is to change the wage rate of workers to show employment benefits. An equivalent approach would be to increase annual revenue by $50,000 while leaving the wage cost at $120,000 per year. The net cash flow in each year would still be $65,000.

Table EX-2

Social Discounted Cash Flow for a Small Example

A. DATA

Initial Capital Cost		$150,000
Annual Sales Revenue		200,000
Annual Costs of Production in Shadow Prices		135,000
Rent	$ 20,000	
Wages	70,000	
Material	4,000	
Environmental Costs	41,000	
Annual Cash Flow		65,000
Scrap Value		10,000

B. CALCULATION

$CF_0 = -150,000$

$CF_1 = 65,000$

$CF_2 = 65,000$

$CF_3 = 65,000$

$FV = 10,000$

$r = .05$

$$NPV = -CF_0 + \frac{CF_1}{(1+r)} + \frac{CF_2}{(1+r)^2} + \frac{CF_3}{(1+r)^3} + \frac{FV}{(1+r)^3}$$

$$NPV = -150,000 + \frac{65,000}{1.05} + \frac{65,000}{1.1025} + \frac{65,000}{1.157625} + \frac{10,000}{1.157625}$$

$$NPV = -150,000 + 61,905 + 58,957 + 56,149 + 8,638$$

$$NPV = 35,649$$

The internal rate of return for a group of cash flows is the interest rate which makes the net present value equal zero. The internal rate of return can be found by searching or through use of a financial hand calculator. The internal rate of return for the private set of cash flows is 8.81 percent. The internal rate of return for the social set of cash flows is 16.95 percent.

Inflation must be dealt with next. An assumption that all prices increase at the same rate is an easy way to deal with inflation. Define the following notation:

i = rate of inflation
m = money rate of interest
r = real rate of interest

The real rate of interest is the rate of interest in constant prices. It is related to the rate of inflation and the money rate of interest by the following formula:

$$(1 + r) = (1 + m)/(1 + i)$$

For example, if $i = .08$ and $m = .18$, one can calculate the implied value for r, which is .0926:

$$1.0925926 = 1.18/1.08$$

When all prices increase at the same rate, one can calculate a discounted cash flow analysis using the real rate of interest given by the above formula or do so using anticipated prices and the monetary rate of interest.

The following formula should be used to calculate net present value when inflation affects costs and revenues at an equal rate:

$$NPV = -CF_0 + \frac{CF_1(1+i)}{(1+m)} + \frac{CF_2(1+i)^2}{(1+m)^2} + \dots + \frac{CF_T(1+i)^T}{(1+m)^T} + \frac{FV(1+i)^T}{(1+m)^T}$$

Where

NPV = net present value.
CF_0 = capital cost in the base year.
$CF_1, CF_2, \ldots CF_T$ = cash flow values in each year in constant prices.
i = rate of inflation.
m = monetary rate of interest.
T = total number of years of the project.
FV = final value of the project in constant prices.

This formula says that that cash flow values are larger each year because of inflation. An increase due to inflation is not "real", however, and the rate of interest used to discount the cash flows must be larger.

The small example can be recalculated with inflation to show that the result is the same. Suppose all prices increase at 10 percent per year. Then, since

$$(1 + m) = (1 + i) \cdot (1 + r),$$

The monetary rate of interest is

$$1.155 = (1.1) \cdot (1.05)$$

This says the monetary rate of interest is 15.5 percent. Table EX-3 shows the calculations for the small example. The present value remains the same.

When people refer to interest rates, they usually refer to monetary interest rates. Real interest rates are of more interest to economists, because of their desire to see through the veil of money to real goods and services. In an actual study, one must be careful to use a monetary rate of interest if future cash flows are calculated in anticipated prices, and to use a real rate of interest if all future cash flows are calculated in today's prices, which then are constant prices. It would be an error to perform the calculations in Table EX-1 using 15.5 percent. If one did so, the net present value of the project in market prices would be negative. The second part of Table EX-3 shows the erroneous result of using a monetary rate of interest with constant prices.

Table EX-3

Private Discounted Cash Flow Analysis for a Small Example with Inflation

A. Calculation done CORRECTLY with 10% rate of inflation, 15.5% interest rate

$$\text{NPV} = CF_0 + \frac{CF_1(1+i)}{(1+m)} + \frac{CF_2(1+i)^2}{(1+m)^2} + \frac{CF_3(1+i)^3}{(1+m)^3} + \frac{FV(1+i)^3}{(1+m)^3}$$

$$\text{NPV} = -150{,}000 + \frac{56{,}000(1.1)}{1.155} + \frac{56{,}000(1.1)^2}{1.334075} + \frac{56{,}000(1.1)^3}{1.540799} + \frac{10{,}000(1.1)^3}{1.540799}$$

$$\text{NPV} = -150{,}000 + \frac{61{,}600}{1.155} + \frac{67{,}760}{1.334075} + \frac{74{,}536}{1.540799} + \frac{13{,}310}{1.504799}$$

$$\text{NPV} = -150{,}000 + 53{,}333 + 50{,}794 + 48{,}375 + 8{,}638$$

$$\text{NPV} = 11{,}140$$

B. Calculation done INCORRECTLY using constant prices but the monetary rate of interest of 15.5%

$$\text{NPV} = -150{,}000 + \frac{56{,}000}{1.155} + \frac{56{,}000}{(1.155)^2} + \frac{56{,}000}{(1.155)^3} + \frac{10{,}000}{(1.155)^3}$$

$$\text{NPV} = -150{,}000 + \frac{56{,}000}{1.155} + \frac{56{,}000}{1.334025} + \frac{56{,}000}{1.540799} + \frac{10{,}000}{1.540799}$$

$$\text{NPV} = -150{,}000 + 48{,}485 + 41{,}978 + 36{,}345 + 6{,}490$$

$$\text{NPV} = -150{,}000 + 133{,}298$$

$$\text{NPV} = -16{,}702$$

If the prices of different components are assumed to change at different rates, the analysis becomes more complicated and a monetary rate of interest must be used. In any analysis of a project, one must predict or make assumptions about future price trends. If the price of output increases at a rate that is lower than the rate of price increase for inputs, then the annual profitability of the project will decline. If the price of output increases faster than costs, then profits will increase. Although the agricultural example about to be examined assumes all prices increase at the same rate, this simplification may not be justified in particular cases.

In summary, social cost-benefit analysis is the application of discounted cash flow analysis from the public rather than the private point of view. Private discounted cash flow analysis identifies a firm's costs and revenues of a project using market prices. Anticipated costs and benefits in each year of the project are identified. An appropriate discount rate is used to convert all future costs and revenues into dollars of the present year. If the present discounted value of costs is less than the present discounted value of benefits, a project is undertaken. Such projects will show a positive discounted present value.

One major reason for recommending social cost-benefit analysis is that it begins with calculation of private discounted cash flow. A second reason is that market prices are adjusted to take account of factors which cause the market price of a good or service to depart from the social value (or cost) of that good or service. Quoting Little and Mirrlees (p. 19):

> The essence of a cost-benefit analysis is that it does not accept that actual receipts adequately measure social benefits, and actual expenditures social costs. But it does accept the actual receipts and expenditures can be suitably adjusted so that the difference between them, which is therefore very closely analogous to ordinary profit, will properly reflect social gain. The prices used, after such adjustments have been made, will be called "social accounting prices," or for short, "accounting prices."

The reasons for using social cost-benefit analysis, therefore, are the reasons that cause market prices to diverge from social accounting prices. This work uses "shadow price" to mean "social accounting price."

Let us suppose that one is considering projects for an Indian reservation. A discounted cash flow analysis has been performed using market prices. What changes might be required to transform private into social cost-benefit analysis? The price of land on an Indian reservation may not reflect scarcity values because of price controls exercised by the tribal council or the BIA. An example is the lease rate on grazing land, which may be above or below its true value. Because Indian land is "trust" land, it is not open to all types of market transactions, and therefore its price may understate its social value. There may be substantial rates of unemployment on the reservation, meaning that market wage rates should be replaced by shadow wage rates that represent what persons actually give up when they accept jobs. The fact that capital markets are imperfect for Indian reservations suggests that the social cost of tribal funds be examined.

Tribal governments are generally dependent on the federal government for many services and expenditures; therefore, the tribal government's independent revenue is especially important. When such funds are committed to an investment project, they may decrease a tribal government's options in the short run; but a later increase in tribal revenue should also be valued at a shadow price. Another aspect of this question is the proper price to give the aid available from government agencies; such aid may have strings which lower its value from a tribe's point of view.

Certain projects may be more beneficial to the poor members of a tribe, while others would benefit the well-off. The distributional impact of a project would cause different weights to be assigned to the income of different individuals in a tribe, as opposed to the market value of the income. External effects should be accounted for in the definition of a project. If such was not done, external costs or benefits would need to be considered. An example is the external cost associated with projects which bring non-Indians onto a reservation to live. Another is pollution, and there are many other possible external costs.

This presentation of social cost-benefit analysis is intended to show the usefulness of project analysis for a development finance institution. Although certain subjective matters are involved, such as the choice of shadow prices and a discount rate, the subjectivity exists within a framework which limits the ability of an analyst to be arbitrary. If we imagine that project analysis occurs in a tense atmosphere, public application of social cost-benefit analysis might serve to reduce tension. As tribes become accustomed to using it, they would present proposals in the framework, and would expect to be judged within that framework.

Past efforts at providing capital by the BIA and EDA have run into problems because particular types of projects were emphasized. In theory, project analysis itself does not support one over another type of project. Each particular mix of market prices and shadow prices, however, would tend to support certain types of projects. Since analysts must give and defend the reasons for each shadow price choice, the resulting "bias" really represents a reasonable outcome.

B. AN AGRICULTURAL PROJECT

We now turn to application of these principles to an agricultural project. This project is constructed that it provides a modest return when one examines only changes in property income. Social cost-benefit analysis gives different results from private cost-benefit analysis. The project lowers the unemployment rate during the lifetime of the project. Because of this effort, the rate of return calculated with profit-type income is smaller than the rate of return when increased wages are counted as a benefit. Evaluations of the project will be made from four points of view: the individual Indian operator, the tribe, the federal government, and the American Indian Development Finance Corporation.

The agricultural project is hypothesized to involve improving the productivity of tribal land which formerly had been leased to non-Indians. This land is then leased to twenty-five Indian operators. The AIDFC loans the tribe $2,500,000 to finance the improvement of the land. The tribe contributes an additional $2,250,000 as a fund for lending to operators for their investment in equipment and animals. These loans may be offered to operators at a rate of interest below the market rate. Operators are assumed to invest an average of $10,000 each from their own resources. The total investment is $5 million dollars. Although an agricultural project can have an indefinite life, for the purposes of this illustration the project period is assumed to be thirty years. All productivity of the project after the first 30 years is captured by an estimated final capital value of $2,000,000 in the first year's prices. Three-quarters of the final value will belong to the tribe and one-quarter to the operators.

The project is assumed to provide 50 full-time jobs. Twenty-five of them are for operators of new farms; these people are assumed to have full time jobs. The other 25 full time positions are as hired labor, and it is assumed than these positions are filled by people who would be unemployed without the project. The provision of full time jobs creates social benefits by providing work, and tangible benefits to the federal government in the form of reduced welfare payments and increased tax revenue.

Table AG–1 presents the basic technical data which describes the annual revenue and costs of the project as a whole. Annual sales of crops are assumed to be $2,800,000 in the first year of operation. Intermediate products and services are assumed to be $1,250,000, of which $175,000 are purchased from other members of the tribe engaged in agriculture. Value added is the difference between sales and the cost of materials, $1,550,000. Value added consists of payments of labor of $800,000; rent of $500,000; and profit of $250,000.

TABLE AG–1.—DATA FOR AN AGRICULTURAL PROJECT WITH INFLATION

Item	1st year	2nd year	30th year
Total sales	$2,800,0000	$3,024,000	$28,175,439
Cost of materials and services	1,250,000	1,350,000	12,578,321
Purchased on reservation:			
Agricultural products	98,000	105,840	986,140
Other products	57,000	61,560	573,571
Purchased off reservation	1,095,000	1,182,600	11,018,609
Value added	1,550,000	1,674,000	15,597,118
Wages	800,000	864,000	8,050,126
Rent	500,000	540,000	5,031,328
Profit	250,000	270,000	2,515,664

Note.—The assumed rate of inflation is 8% per year for all components.

Each year, these components all increase in magnitude because of inflation, which is assumed to average 8 percent during the life of the project. The second column of Table AG–1 gives the components in the second year, and the third column gives them for the thirtieth year. With an assumed inflation rate of 8 percent per year, the final capital value of the project is $2,000,000 times 1.08 to the 30th power. The multiplication factor is 10.06267; prices increase by a factor of more than ten during the thirty year project. The final value is $20,125,340 in prices of the thirtieth year.

It is assumed that the monetary rate of interest is anticipated to be 18 percent for the life of the project and that inflation will continue at 8 percent. The real rate of interest, therefore, is 9.26 percent.[3]

C. THE RETURN TO CAPITAL ALONE

The first illustrative calculation gives the present value and internal rate of return of the project using only profit-type income, no matter who is the recipient. These benefits will be compared to the total capital outlay of $5,000,000. The components of the increase in property income are listed in Table AG-2. They total $550,000 per year. The estimated final capital value of the project is $2,000,000. The present value of the income plus the final capital value is $5,663,466 at an interest rate of 9.26 percent. Since the capital cost is $5 million, the net present value is $663,466. The internal rate of return for this is 10.57 percent. According to this analysis, the overall financial return on this project is *modest* if it is regarded solely in terms of its change in property income.[4]

Table AG-2.—Return on combined capital account

(Constant prices)

Capital outlay	$5,000,000
AIDFC	2,500,000
Tribe	2,250,000
Individuals	250,000
Annual increase in property income	550,000
New rent to tribal land	300,000
Profit	250,000
Final capital value	2,000,000

Discounted cash flow results:
Number of periods: 30
Rate of interest: 9.26 percent
Net present value: 663,466
Internal rate of return: 10.68 percent

D. INDIVIDUAL OPERATOR'S ANALYSIS

This project is presented with three different options, depending upon what the tribe offers to individual operators on the project. The reason for this is that the riskiness from the point of view of a potential operator may be greater than from the point of view of the tribal government. Therefore, the government may wish to create inducements to encourage tribal members to participate in the project. The tribal government has two controls: the annual rent on land and the rate of interest to the operator. Three options are presented here:

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[3] The actual value used in calculation for this chapter is 9.25926, devised from the expression $(1 + r) = (1.18)/(1.08) = 1.095926$.

[4] In the calculations in this and the subsequent chapters, I used one of the financial hand calculators that are now available, the Hewlett-Packard HP-38C. The HP manual for financial calculations explains the use quite simply. Negative signs signify outflows and positive ones inflows. For a period of 30 years, an interest rate of 9.26, an annual payment of 550,000, and a final value of 2,000,000, the calculator gives a present value of −5,663,466. Since the project only costs 5,000,000, this is a positive net present value. The reasoning is that we should have to pay 5,663,466 to obtain the indicated flow of payments at a rate of interest of 9.26 percent. Since we only pay 5,000,000, the net present value is positive.

1. Rent and loan terms are determined by cost to the tribe. The unimproved land is renting for $200,000; this is $8,000 per operator. The amortization of the $2,500,000 loan for the improvement of the land is $248,955 per year. This is $9,958 for each of the 25 operators. These total $17,958 for land rental. Amortization of the loan to each operator is $8,963 per year for the thirty years.
2. The rent is above cost, but the loan is below the market rate, at r = 5 percent. In this case, rent for the land remains at $17,958. The loan's annual cost falls to $5,856 per year per operator.
3. The rent is above cost, at 20,000 for each operator, but the loan is below cost, at r = 5 percent.

These three options each have different implications for the individual operator's analysis and for the tribal social cost-benefits analysis. The third of these options was arbitrarily chosen to serve as the one used in the calculation of effects with the social accounting matrix.

Table AG-3 gives the annual data for an average operator. The top half of the table shows the data in money prices which increase at the rate of inflation. The second part of the table shows the division of gross property income for each of the three options, in constant prices. The first column in the top half of the table is taken from the data in Table AG-1. Each operator is assumed to be one-twenty-fifth of the total. For all options, a value of sales, cost of materials, and wages are the same. For convenience, the wage of the operator before he started the project is charged as a wage cost rather than included in the net cash flow. This is done to avoid mixing wages with property-type income (although most farmers do not separate these in their own accounts). The last line of the first part of the table gives the total property income (that is, rent and profit) as $30,000 per operator.

TABLE AG-3.—INDIVIDUAL OPERATOR'S ANNUAL DATA

A. Inflation shown

Item	1st year	2d year	30th year
Total sales	$112,000	$120,960	$1,127,018
Cost of materials and services	50,000	54,000	503,133
Value added	62,000	66,960	623,885
Wages	32,000	34,560	322,005
(Operator)	(18,000)	(19,440)	(181,128)
(Hired workers)	(14,000)	(15,120)	(140,877)
Gross property income	30,000	32,400	301,880

B. Three options in constant prices

	Option 1	Option 2	Option 3
Gross property income	30,000	30,000	30,000
Less:			
Rent	−17,958	−17,958	−20,000
Amortization on loan	−8,963	−5,856	−5,856
Federal taxes	0	−500	−200
Equals:			
Cash flow	3,079	5,686	3,944
(Of which, depreciation is:)	3,000	3,000	3,000

In the second part of the table, the $30,000 is broken up in different ways, depending upon the option. Rent is $17,958 for the first two options and rises to $20,000 in the third. Amortization of the tribal loan is $8,963 in the first option and $5,856 in the last two. Depreciation is assumed to be $3,000 for all three options. Once depreciation is subtracted from cash flow in the first option, the net increase in the operator's income is only $79. Therefore, taxes are assumed to be zero. In the second option, $6,186 is available to the operator after subtracting rent and loan amortization. Subtraction of depreciation gives net income of $3,186. It is assumed that $500 in income taxes would be paid on this. Therefore, the operator's actual cash flow is $5,686. In the third option, net income for the operator is less, and his taxes are therefore also less, $200.

Table AG-4 gives the operator's private discounted cash flow analysis under each option. Assuming each operator applies a real discount rate of 9.26 percent, the result for the first option is that the present value of the project is over twice the operator's contribution. This return is above that shown in table AG-2 because of a leverage factor: Most of the return above costs goes to the operator, who has contributed only 5 percent of the capital.

Table AG-4.—Operator's discounted cash flow analysis

[Constant dollars]

All options:	
Number of periods	30
Initial capital outlay	$10,000
Final capital value	$20,000
Option 1: Rent and loan determined by r = 9.26 percent:	
Annual cash flow	$3,079
Present value at 9.26 percent	$22,327
Internal rate of return (percent)	30.80
Option 2: Rent determined by r = 9.26 percent, loan at r = 5 percent:	
Annual cash flow	$5,686
Present value at 9.26 percent	$48,502
Internal rate of return (percent)	56.86
Option 3: Rent above cost (at $20,000), loan below cost (at 5 percent):	
Annual cash flow	$3,944
Present value at 9.26 percent	$31,009
Internal rate of return (percent)	39.44

The present value for the second option is even higher, $48,502. The internal rate of return is 56.86 percent. This is the best option of the three for the operator.

For option 3, the present value of the project is more than four times the operator's contribution of $10,000. The internal rate of return for an operator is 39.44 percent. This hefty rate of return is partly due to the leverage factor mentioned above, and partly due to the fact that the tribe offers him a loan at the favorable rate of 5 percent after inflation. (If inflation is assumed to be 8 percent, the money rate of interest on the loan is 13.4 percent.)

E. TRIBAL ANALYSIS

There are two ways to conduct the tribal analysis. The first considers only cash outlays and cash returns of the tribe in calculating the costs and benefits of the project. The second combines the tribe's position with that of its members. This gives a *social* cost-benefit analysis. Table AG–5 gives the costs and benefits to be considered in evaluating the project from a tribal point of view. The tribe's new cash flow is the net increase in lease income from the land and the amortization of each farm operator's loan. Other benefits are the net increase in the incomes of formerly unemployed tribal workers, and the net increase in the income of tribal farm operators.

The top half of Table AG–5 gives the data that applies to all the options. The tribal government spends $2,250,000 of its own funds, and tribal members spend $250,000. The tribe gives up its current lease revenue on the land, $200,000. It must repay the loan from the AIDFC at a real rate of interest of 9.26 percent. This treatment of the AIDFC loan follows from an assumption that the loan will be available only for this project. Therefore, it is a cost only when repaid, not when originally accepted. The total annual costs, therefore, are $448,955 per year.

TABLE AG–5.—TRIBAL BENEFITS AND COSTS

[Constant dollars]

Initial capital outlay:	
Tribal government	$2,250,000
Individual tribal members	250,000
Annual costs:	
Foregone lease revenue	200,000
Amortization of AIDFC loan at the real rate of interest (r=9.26 percent)	248,955
Subtotal	448,955

Annual benefits	Option 1	Option 2	Option 3
Tribal revenue:			
Rent on tribal land	$448,955	$448,955	$500,000
Amortization of loans to operators	224,059	146,391	146,391
Subtotal, tribal revenue	673,014	595,346	646,391
Subtotal, tribal net benefits	224,059	146,391	197,436
Individual tribal members:			
Net increase in wage income	215,500	215,500	215,500
Net cash flow of farmers	76,986	142,150	98,616
Subtotal, individual's cash flow	292,486	357,650	314,116
Total, net benefits	516,545	504,041	511,552

The benefits depend upon the option chosen. The tribal revenue comes from rent paid by operators and from amortization of the tribal loans. The revenue is $673,014 for the first option. This is 25 times the amount paid by each operator, which is in Table AG–3. Each operator pays $17,958 in rent and $8,963 in loan amortization in the first case. Tribal revenue is highest in the first case, lowest in the second. Tribal net benefits are obtained by subtracting the annual costs of $448,955 from each of the revenue figures.

It is assumed that all of the hired labor would be unemployed and receiving welfare payments had this project not been undertaken. This can be interpreted to mean that on average the extra unemployment experienced by workers on the reservation would have been 25 additional person-years during the lifetime of the project. A new source of steady employment is created when the project goes into operation. (The assumption does not mean that approximately 25 workers would have been permanently out of work for thirty years. Periods of unemployment probably would be spread over a large number of people.)

With this interpretation, then, there are an additional 25 worker years of employment at an annual wage of $14,000. This leads to an annual reduction of transfer payments of $3,000 per worker and an annual increase of $2,380 in income taxes. Therefore, the net return per worker if $14,000 minus $5,380, or $8,620. For all 25 workers, the return is $215,500 per year in constant dollars. This is the first of the benefits to individual tribal members which the tribal government will consider as a benefit.

The second individual set of benefits follows from the net cash flow of farmers. These figures are taken by multiplying the values in Table AG-3 by twenty-five. The total individual benefits are $292,486 in the first option, $357,650 in the second, and $314,116 in the third.

Table AG-6 gives the two different discounted cash flow analyses for each of the three options under consideration. When only tribal revenue is considered, the present value of the project is negative for the two options that involve subsidies to operators. (The present value is positive in the first option because of the final capital value, which is worth $105,279 in present value at the real rate of interest.) When the benefits to tribal members are added, along with the additional capital outlay of the operators, the net present value becomes positive and the internal rate of return is above 20 percent for each of the three options.

TABLE AG-6.—TRIBAL DISCOUNTED CASH FLOW ANALYSIS

	Option 1	Option 2	Option 3
I. Tribal cash flow only:			
Number of periods	30		
Initial capital outlay	$2,250,000		
Final capital value	$1,500,000		
Annual benefits	$673,014	$595,346	$646,391
Annual costs	−$448,955	−$448,955	−$448,955
Annual cash flow	$224,059	$146,391	$197,436
Present value, r=9.26 percent	$105,279	−$674,663	−$162,070
Internal rate of return (percent)	9.75	6.09	8.51
II. Tribal and individual cash flows:			
Number of periods	30		
Initial capital outlay	$2,500,000		
Final capital value	$2,000,000		
Annual tribal cash flow	$224,059	$146,391	$197,436
Annual individual's cash flow	$292,486	$357,650	$314,116
Annual total cash flow	$516,545	$504,041	$511,552
Present value, r=9.26 percent	$2,827,511	$2,701,946	$2,777,372
Internal rate of return (percent)	20.65	20.14	20.45

F. THE FEDERAL ANALYSIS

The federal analysis from the point of view of the loan amortization only would show no net benefit, whether or not the federal government regards the expenditures by the AIDFC as federal expenditures. The reason is that the AIDFC is obtaining the market rate of interest on the loan.

But from a broader federal perspective, there is a positive present value for the project because of the change in federal revenue and costs due to the additional employment of 25 full time workers on the reservation. Each of the hired workers will pay $2,380 in income taxes and will receive an average of $3,000 less transfer payment income. The total increase in revenue for the federal government is $134,500 because of the employed workers; the present value is $1,350,647 for the first 30 years. In addition, each of the farmers will pay additional taxes if the tribe adopts either Option 2 or Option 3.

Under Option 2, each farmer pays an additional $500 a year in taxes. This leads to a federal benefit of $12,500 for the operator's taxes; when added to the change due to employing the hired labor, the total federal benefit is $147,000 per year. The present value is $1,476,172.

Under Option 3, each farmer will pay $200 additional per year because of an increase in income above the previous salary. The total change in the budget of the federal government is an increase of $64,500 in taxes and a decrease of $75,000 a year in transfer payments. There is a net benefit of $139,500 per year; the present value of this flow over 30 years is $1,400,857.

One could calculate an internal rate of return from the federal point of view if one assumed that the AIDFC capital contribution is a federal cost. In the AIDFC analysis in the next section, the federal returns are counted, but they aren't examined separately. The annual returns to the federal government would be the $139,500 just discussed plus the $248,954 amortization of the loan. With an initial capital value of $2,500,000 and an annual return of $388,454 per year for thirty years, the internal rate of return would be 15.3 percent.

G. THE AIDFC ANALYSIS

(1) Financial

The point of view of an American Indian Development Finance Corporation is examined next. The AIDFC itself is involved only through its loan, which is made to the tribe at the market rate of interest. Of course, the net present value of this loan is exactly zero, since it will be paid off in thirty years at the going rate of interest.

(2) Social

The AIDFC should also consider the social benefits to the tribe and the social benefits to the federal government. The tribal social benefits are given in Table AG–6. The federal benefits are those discussed above that result from a decrease in transfers and an increase in taxes. Federal benefits are increased in options 2 and 3 because the farm operators pay income taxes. These are matched exactly by decreases in the cash flow of operators. The only extra federal benefits are the income taxes paid and the transfers not received by formerly unemployed workers. Therefore, the total social benefits are the same for all three options. It does not matter which of the various people or institutions receive the benefits, since we are not assigning different weights to each of them.

For this reason, we can look at total benefits as the sum of all additional property income, extra net wages to workers formerly unemployed, and the change in the federal budget due to taxes and transfers. The increase in rent and profit totals $550,000 (See Table AG–2), the new income of workers is $215,000, and the increase in the federal surplus due to tax and transfer changes is $134,500. The total social benefits are $900,000 each year. The second part of Table AG–7 provides the AIDFC's social cost-benefit analysis. The total capital cost is $5,000,000. At the going real rate of interest, this project has a net present value of $4,178,162. Its internal rate of return is 17.92 percent.

TABLE AG–7.—AIDFC ANALYSIS

I. Financial:	
Number of periods	30
Rate of interest (percent)	9.26
Initial capital outlay	$2,500,000
Annual payment	$248,955
Net present value	0
II. Social analysis:	
Number of periods	30
Rate of interest (percent)	9.26
Initial capital outlay	$5,000,000
Final capital value	$2,00,000
Annual net benefits	$900,000
Wages	$215,500
Rent and profit	$550,000
Federal	$134,500
Net present value	$4,178,162
Internal rate of return (percent)	17.92

H. INSTITUTIONAL ANALYSIS OF AN AGRICULTURAL PROJECT

An essential component of an analysis of an agricultural project would be examination of institutional issues. The checklist at the end of Chapter 2 would assist identification of important factors. Results would depend upon the particular situation. That this chapter uses an imaginary example makes illustration of such analysis very difficult. Too many possibilities exist to make a single set of answers believable. Rather than proceed to describe a non-existent situation, this section provides a few remarks about the institutional possibilities.

Authority.—The agricultural project design assumes that single proprietorships are effective ways for farms to be organized. This seems to be a reasonable assumption, since many individual Indians are employed in agriculture on Indian reservations, primarily in ranching. The remarks in the section on authority in Chapter 2 are concerned mainly with the organization of large enterprises where the labor force is greater than that of an operator and one laborer.

Kinship and generosity.—The main argument of the kinship section was that we cannot say whether or not duties to one's kin will affect the operation of a business. Thus, it is reasonable to assume that single proprietorships can function without a drain on the individual's ability to preserve the capital value of his enterprise. But, since the issue is often raised, an analyst would want to investigate the experience of individual farm or ranch operators on a reservation to verify that the single proprietorship form of organization can resist demands that its capital be dissipated.

Welfare.—The main recommendation of the welfare section is that projects which provide alternatives to welfare be large enough to move a person far from the welfare margin and that the project offer hope of a permanent change in status. The agricultural project has both of these characteristics.

Patron-client politics.—A system of electoral patron-client politics might affect an agricultural project in at least three ways. First, the selection of operators on the project would be of great interest to patrons wishing to assist their clients. Since the opportunity to benefit from tribal and AIDFC investment would be alluring, the consequent political activity should be taken into account. A need for equitable allocation of this opportunity might contribute somewhat to depoliticizing the project. But it is difficult to imagine that a project could be completely separated from political action.

Second, the financial terms offered to operators would be a subject of considerable debate. This is an aspect of the value of the benefit received by operators. The larger the apparent subsidy from the tribe to operators, the larger is the importance of considering income distribution questions. Would the potential operators be from the rich or the poor on the reservation?

Third, the construction of the project could become embroiled in patron-client connections. No discussion is offered in this Chapter on the subject of the organization and design of the expenditure for capital construction for the agricultural project. The assumption was that the project could be constructed in an efficient manner. But in the political situation on a reservation, political connections to patrons in either the Council or the Bureau might be important in the choice of contractors to improve the land for the project. Possible unfortunate aspects of political rather than technical selection of construction firms might matter.

Common property.—Assembling land for use in an agricultural project may involve much adjustment in land tenure. The exact problem would be different on every reservation. But whether or not allotted land is involved would be important. Usually, land is being used by someone, and the rights and political power of those users needs to be taken into account.

Transaction costs.—One major transaction cost for individual operators of agricultural enterprises is that access to capital on the private market is difficult. This difficulty is taken into account in the design of the agricultural project, since it includes the availability of loans to the operators from the project. Even so, there may be costs which are underestimated in the given data.

For instance, there was no discussion of the availability of extension aid to the operators. No agricultural project of substantial magnitude can succeed without some attention to the provision of technical assistance to operators as they modify their production activities to take advantage of new opportunities. It may be that extension aid is available only through the State, and that Indian operators have problems getting help.

I. IMPACT ON RESERVATION ACCOUNTS

A next step in analyzing the agricultural project would be to chart the changes in reservation accounts. Chapter 3 presented an accounting framework that might be used to trace through the effects of a project on a reservation's economy. The purpose of this section is to use the 10 by 10 accounts presented in that chapter to examine the effects of a project. The tables presented so far in this chapter examine only the "direct" effects of project. The more curious reader may be interested in other effects. For instance, does the purchase of consumption goods by workers in this project help other sectors on the reservation? Does the purchase of inputs to the agricultural activity on the many farms aid other agricultural producers on the reservation? How much of the additional income earned on the reservation stays on it, and how much is "leaked" out to the surrounding economy? Questions such as these can be answered with a social accounting matrix, a SAM, providing one is willing to accept some assumptions.

In carrying out an analysis with a social accounting matrix, it is helpful to do so in stages. First one examines the direct effects, and shows how the direct effects create imbalance in a SAM. The definition of "imbalance" is that the sum of each row no longer equals the sum of each column. The next step is to move towards balance by changing other parts of the SAM so that some of the row and column sums are equal. One might choose as a goal the attainment of a new full-balanced SAM. Although this would be a useful exercise, our purpose is only to gain insight about the possible consequences of a project. The SAM itself does not provide enough information to serve alone as a tool for predicting the consequences of a new economic activity. To predict all the consequences, one has to know something about the behavior of various parts of the economy when there is change. The SAM only tells us where we are. Or, in the case of this example, where we imagine we are.

Looking ahead, Tables AG-8 and AG-9 present two steps towards balancing our SAM. Table AG-8 shows the "direct" or "first round" changes in dollar flows during any of the years of operation of the project, using the 10 by 10 example of a reservation social accounting matrix. This table does not present the indirect or induced effects of the project; for this reason the changes do not result in a balanced set of accounts. In order to balance the accounts, one must chart out the impacts of extra purchases by the producers in the agricultural project both for purchases of inputs in agriculture and purchases for their own consumption. Table AG–9 presents the effects of the additional purchases just described on output in the two production sectors. Most accounts balance; but the government, capital, and the rest-of-world accounts are not in balance. A third set of assumptions and computations would have to be made to complete the rebalancing of the social accounting matrix. Tables AG–8 and AG–9 present the first steps, therefore, in the use of a SAM to examine the impacts of a new project on a reservation's economy.

Table AG-8

Direct Effect of Agricultural Project

Expenditures ($000's)

	PRODUCTION			INSTITUTIONS							
	Agri (1)	Other (2)	Imports (3)	Firms (4)	Households (5)	Governments (6)	Labor (7)	Property (8)	Capital (9)	Rest of World (10)	Totals
(1) Agriculture	+98				+6.5					+2,800	+2,904.5
(2) All Other	+57				+48.3						+105.3
(3) Imports					+233.1						+233.1
(4) Firms	+1,550										+1,550.0
(5) Households							+448.6			-75	+373.6
(6) Governments				+5	+59.5			+197.4			+261.9
(7) Labor				+898.6						-450	+448.6
(8) Property				+397.4						-200	+197.4
(9) Capital				+249.0	+26.2					-264.9	+10.3
(10) Rest of World	+1,095		+233.1								+1,328.1
Totals	+2,800			+1,550	+373.6	0	+448.6	+197.4		+1,801.1	
Balance?	No	No	Yes	Yes	Yes	No	Yes	Yes	No	No	

Table AG-9

Some Induced Effects of the Agricultural Project

Expenditures

	PRODUCTION			INSTITUTIONS							EFFECTS		
	Agri (1)	Other (2)	Imports (3)	Firms (4)	Households (5)	Governments (6)	Labor (7)	Property (8)	Capital (9)	Rest of World (10)	Total Induced	Total Direct	Direct & Induced
(1) Agriculture	+9.1	+.8			+1.8						+11.7	+2,904.5	2,916.2
(2) All Other	+5.3	+7.0			+13.0						+25.3	+105.3	130.6
(3) Imports					+62.9						+62.9	+233.1	296.0
(4) Firms	+51.7	+75.5									+127.2	+1,550	11,677.2
(5) Households							+95.9	+6.2			+102.1	+373.6	475.7
(6) Governments				+9.6	+17.4						+27.0	+261.9	288.9
(7) Labor				+95.9							+95.9	+448.6	544.5
(8) Property				+6.2							+6.2	+197.4	203.6
(9) Capital				+15.5	+7.0					-16.6	+5.9	+10.3	+16.2
(10) Rest of World	+50.1	+47.4	+62.9								+160.4	+1,328.1	1,488.5
Total Induced	+116.2	+130.6	+62.9	+127.2	+102.1	0	+95.9	+6.2	0	-16.6			
Total Direct (Table AG-8)	+2,800		+233.1	+1,550	+373.6	+0	+448.6	+197.4	0	+1,810.1			
Direct and Induced	+2,916.2	+130.6	+296.0	+1,677.2	+475.7	+0	+544.5	+203.6	0	+1,793.5			
Is Balance Achieved	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No	No			

The analysis of the agricultural project up to this point has had three options and each option was evaluated. The effects on the SAM will be charted only for the third of the three options. The first round effects of the project consist of the following changes, presented in Table AG-8:

1. An increase of $2,800,000 in exports. This is the entry in row 1, column 10. The sales of agricultural products from the project is assumed to be entirely to purchasers off the reservation. Column 1 gives the way in which the project purchases materials, labor, and rent. The increase of $2,800,000 in row 1 is matched by an increase of $2,800,000 in column 1, to which we now turn.

2. Column 1 shows how the total sales value of agricultural products is distributed to value added and to purchased material inputs. These numbers are taken from the first column of Table AG-1. Material inputs come from three sources. Imports account for $1,095,000 of the cost of production. Material inputs purchased on the reservation are $98,000 from other agriculture, and $57,000 from all other sectors on the reservation. There is an increase of $1,550,000 in value added in agriculture (row 4, column 1). Next we examine the impact of value added in other parts of the matrix.

3. Column 4 shows the distribution of the net increase in value added. Wages increase by $898,600. This is the sum of wages paid to hired workers, $350,000, wages of operators before the project occurs, $450,000, and self-employment net cash flow of $98,600 to farmers (Option 3 in Table AG-3). Property incomes created on the reservation increase by $397,400. Governments receive an additional $5,000; this is payment by operators of their contribution to their workers' FICA Social Security tax. There is a payment of $249,000 to the capital account. This is the annual payment to amortize the loan from the AIDFC (which has been rounded upward from the figure of $248,955 given in Table AG-5). It is entered in column 4 row 9 as a positive entry and in column 10 of the same row as a negative entry. (The actual number in column 10 of row 9 is larger because it includes an outflow of savings by households). The next step is to examine each of the rows which have been affected by these changes in the third column.

4. The increase in labor income from the project is $898,600 (row 7, column 4); but the net increase in labor income in the reservation is less, because the operators are already employed. Assume all the operators were working for non-Indians. Then we must reduce labor income from the rest-of-world by $450,000, the wages which these operators would receive without the project. Such wages are shown by the negative entry in row 7, column 10. Thus the *net* increase in labor income is $448,600. This is shown as the sum of row 7. This sum is entered in column 7 as a payment by the factor, "labor" to households.

5. Row 8 shows the changes in property income. The project pays $397,400 to the tribe as earnings on tribal property. Rent of land to outsiders falls by $200,000. This is shown by the −200 in row 8, column 10. The net increase in property income is therefore only $197,400. This is the sum of row 8 and is entered in column 8 as a payment by tribal property to the tribal government.

We have now examined all of the entries in the interior of Table AG-8 which are immediate impacts of the agricultural project. The next step is to examine the ways in which these entries affect other parts of the table. I have chosen to put one more step into this table, by showing how households dispose of the additional income which they receive. This is done by showing their expenditures. But before examining their expenditures, we must reduce their receipts by the reduction in transfer payments.

6. Transfer payments are reduced by $75,000; this represents the assumed reduction of $3,000 per worker that is no longer unemployed. It is entered as a negative entry in row 5, column 10, where we record payments from governments to households that are transfers from the rest-of-the-world.

7. We now turn to household expenditures, column 5. The sixth entry in column 5 shows taxes paid by households to governments, $59,500. This represents income tax and FICA tax payments to the federal government. The total taxes paid are taken from the calculation in section 4.E that total federal taxes under Option 3 are $64,800. Part of this total is FICA taxes paid by firms (the $5,000 entry in row 6, column 4), and the remainder is FICA tax and income tax paid by households.

8. Rows 1 and 2 of column 5 show the purchase of products produced on the reservation by households. They purchase $6,500 worth of agricultural products and $48,300 worth of other products and services on the reservation.

9. Purchases of goods and services produced off the reservation are entered as imports on the rest-of-world account. This is the largest type of expenditure by households, a total of $233,100, entered in row 3, column 5, and again in column 3 of row 10.

10. Row 9 of column 5 shows savings by households. Such savings are assumed to be $26,200. Of this, savings invested off the reservation are $15,900. This is entered in row 9, column 10, as a negative flow. The total outflow on the capital account is the sum of this figure and the amortization of the AIDFC loan.

This completes the description of the entries within Table AG-8. We now should back off a bit and examine the imbalances which have now been created in the reservation accounts. This means 10 comparisons must be made, as follows:

Row and Column 1.—The row and column do not balance. The column sum is the increase in expenditures of the agricultural sector caused by creation of the project, $2,800,000. The row sum is the additional demand for production of agricultural products. The largest entry, the export entry, matches the column. But there are two additional entries, the purchase of agricultural goods by households, $6,500, and the purchase of inputs by the project, $98,000. The row sum is $2,904,500.

Row and Column 2.—The row sum represents additional purchases of goods from "all other" production on the reservation of $48,300 by consumers and $57,000 by the project. The column sum is zero, and consequently the changes do not balance.

Row and Column 3.—These balance by definition, since the importing activity is in the table to serve the purpose of handling the consumption of imported goods.

Row and Column 4.—This account is balanced. All the new value added is distributed by column 4 to the sectors that receive it.

Row and Column 5.—The changes in the income and expenditures of households also balance. This occurs because we have shown the household expenditures in column 5.

Row and Column 6.—The changes in these do not balance. Expenditures by governments have not changed. Receipts of governments have increased by $261,900 (the sum of changes in row 6).

Row and Column 7.—The entries balance; $448,600 is added as receipts by labor and as expenditures by labor to households.

Row and Column 8.—The changes in this row and column also are equal.

Row and Column 9.—There is an increase of $10,300 by the capital account on the reservation, shown by the row sum. The row sum is the net on-reservation saving by households. The entire entry in column 4 of row 9 is the payment to the AIDFC; this is then subtracted in column 10 to show it as an outflow on the capital account. The negative value of −264.9 is the sum of the AIDFC payment and investment in off-reservation institutions by households. This latter amount is $15,900. But we do not yet know how this saving by households was invested, which would show up in column 9. There is no balance here.

Row and Column 10.—The sum of row 10 is the total change in the value of goods and services imported by the reservation economy, $1,328,100. This is the sum of imports by consumers and imports by producers in agriculture. The column sum has five parts. Exports of agricultural goods increase by $2,800,000; transfers to households fall by $75,000; receipts of labor services decrease by $450,000; receipts of land services decrease by $200,000; and there is an outflow on the capital account of $264,900. The total change in the column sum is $1,810,000. The row and column sums do not match. The reservation economy can purchase an additional $482,000 from the rest-of-world. But we need to identify the purchasers in order to balance this account. And things will change in row and column 10 when we try to balance other parts of the table. Since there is no exchange rate between a reservation economy and the American economy, a zero balance of payments can only be achieved through changes in the quantities exchanged between the reservation and the American economy, or by price changes.

The next step is to attempt to remove of the imbalances just listed. There are five balanced and five unbalanced accounts. One can obtain seven balanced accounts by tracing through the effect of additional purchases of agricultural and "all other" products. The goal is to balance *row and column 1* and *row and column 2*. Doing so is a bit complicated, since if we increase the production of goods in order to satisfy the extra demand, this increase further increases household income and thus requires still more of an increase in goods to meet the extra demand for consumption. In addition, the increase in output of agricultural goods and of "all other" goods also increases the demand for each type of good.

Fortunately, techniques exist which allow one to work through all the changes caused by changes, in order to arrive at a solution. This has been done using Leontieff's method of solving input-output models and the results are shown in Table AG–9. The reader should not expect to be able to understand the methods used in computing the answer. One calculates the consequences of increasing the production of agricultural products by $104,500 and of increasing the production of all other products by $105,300. The first of these numbers come from adding the increases in demand for agricultural products over and above the output of the new project. This is the sum of the first and second numbers in row 1 of Table AG–8, namely $6,500 + $98,000. The second number is the sum of row 2 of Table AG–8.

Some assumptions had to be made. First, one needs to distribute extra value added to factors of production. Second, one must distribute additional income received by households over the expenditures of households, namely, taxes, consumption, and saving. These assumptions are listed in Table AG–10 and Table AG–11. The calculations are laid out in Table AG–13, for examination by those who have studied input-output algebra. Most readers will be interested only in the results.

TABLE AG–10.—DISTRIBUTION OF VALUE ADDED TO FACTORS OF PRODUCTION

	Proportional division of $1 in value added
Labor income of households	.7543
Property income of households	.0429
(Total household income)	(.8029)
Equity income of tribal government	.0755
Retained earnings on reservation	.0244
Retained earnings off reservation	.0973
Total value added	1.0000

TABLE AG–11.—MARGINAL BUDGET SHARES OF HOUSEHOLDS

	Proportional distribution of $1 in disposable income
Agriculture	.0208
All other	.1539
Imports	.7421
Saving on reservation	.0327
Saving off reservation	.0505

	Proportional spending out of income (marginal tax rate is .1704)
Agriculture	.01726 = .0208* (1—.1704)
All other	.1277 = .1539* (1—.1704)
Imports	.6156 = .7421* (1—.1704)
Saving on reservation	.0271 = .0327* (1—.1704)
Saving off reservation	.0419 = .0505* (1—.1704)

TABLE AG–12.—TECHNICAL PRODUCTION COEFFICIENTS

Selling sector	Purchasing sector	
	Agriculture	All other
Agriculture	.0787	.005778
All other	.04537	.05351
Imports	.4315	.3629

TABLE AG–12.—TECHNICAL PRODUCTION COEFFICIENTS—Continued

Selling sector	Purchasing sector	
	Agriculture	All other
Value added	.4444	.5778
Sum	1.0	1.0

TABLE AG–13.—MODEL CALCULATIONS

	Purchasing sector		
	Agriculture	Other	Households
I. Technical coefficients, households endogenous (the A matrix):			
Selling sector:			
Agriculture	.0787	.005778	.01726
Other	.04537	.05351	.012770
Households	.3569	.4641	0
II. Total requirements matrix (R) (the inverse of I–A):			
Selling sector:			
Agriculture	1.09442	.17008	.02106
Other	.11218	1.12885	.14609
Households	.44266	.52997	1.07532
III. Change in final demands (F):			
Agriculture	104.5		
Other	105.3		
Households	0.0		
IV. Change in output (X) (equals R*F, matrix multiplication, as shown):			
Agriculture: 116.16 = 1.09442*104.5 + .017008*105.3			
Other: 130.59 = .11218*104.5 + 1.18885*105.3			
Households: 102.05 = .44266*104.5 + .52997*105.3			
V. Values of computed changes by sector (the first three rows are A*X):			
Selling sector:			
Agriculture	9.142	0.754	1.762
Other	5.270	6.988	13.034
Households	41.457	60.608	0.0
Imports	50.122	47.39	62.857
Other value added	10.167	14.850	0.0
Taxes			17.412
Savings			7.000

Let us return to Table AG–9 and examine the results. The interior of the table gives the changes calculated using the data in Tables AG–10 and AG–11 and shown in Table AG–12. We now examine all rows and columns again.

Row and Column 1.—These represent the transactions of the agricultural sector of the reservation. From Table AG–8, we obtained an increase of $104,500 above the extra output of the project. The entries in row 1 give the additional demand which was caused by the extra output of agriculture and other production on the reservation. There is an additional demand of $1,800 in consumption, $9,100 in inputs into agriculture, and $800 of additional inputs into all other production on the reservation. The column gives the purchases of the agricultural sector for producing both the original extra $104,500 and the further $11,700. There is an additional $51,700 in value added, $9,100 of purchases within agriculture, $5,300 of purchases from other production on the reservation, and additional imports of $50,100. The column sum shows the full value of the extra production, and the row sum gives just the additional production needed to obtain balance. When the row sum, $11,700 is added to the row sum of Table AG–8, the grand total equals the grand total of the column sums of column 1 in Tables AG–8 and AG–9. The result is balance in row and column 1.

Row and Column 2.—Table AG–8 gave an increase in demand of 105.3 for all other production on the reservation. This and the additional demand for agricultural products spurred an extra $25,300 worth of production in all other sectors on the reservation. Row 2 shows that the extra production satisfied $13,000 of consumption demand, $5,300 of demand by agriculture, and $7,000 of demand by other sectors for their own products. As result, the row and column balance with a level of production equal to $130,600. The column gives the purchases used to make $130,600 worth of output.

Row and Column 3.—These remain balanced. There is an increase of $62,900 in imports due to additional consumption by households.

Row and Column 4.—The source of valued added is indicated under the two production columns, column 1 and column 2 of row 4. The cause of this value added is the additional production of agriculture and other products caused by the additional demand by consumers and by the project. Column 4 gives the distribution of value added to its parts, as assumed in the data given in Table AG–10. Wages increase by 95,900; property income distributed to households increase by $6,200. It assumed that the tribal government receives $9,600 of value added. This should be funds received by the tribal government in its taxation rather than property owning role. Funds received as an equity participant or as a lender should be received by tribal property before being transferred to the tribal government. The Indian firms also retain earnings, which they allocate to the capital account, indicated in row 9 of column 4.

Row and Column 5.—The households had their incomes increased by a total of $102,100 because of their share of additional value added. This is shown by the entries in columns 7 and 8 of row 5. Column 5 shows how households spent the additional income. They paid an additional $17,400 in taxes to the federal government. They consumed an additional $1,800 worth of reservation-produced agricultural products, and they purchased an additional $13,000 worth of all other products on the reservation. They saved $7,000; $2,800 is invested on the reservation and $4,200 off the reservation. They spent an additional $62,900 in imports of goods produced off the reservation, shown in row 3.

Row and Column 6.—In row and column 6 the changes do not balance. There are no assumed changes in government expenditure as a result of increases in government revenue.

Row and Column 7.—This row shows that there is additional demand of $95,900 per year for workers, which enters as a payment to labor by firms and a payment by labor to households.

Row and Column 8.—There is an increase of $6,200 of income to property, all of which is distributed to households owning property.

Row and Column 9.—Balance is not achieved because we make no assumptions about investment behavior. Consequently, there are no entries in column 9. A total of $16,200 is available for on-reservation investment.

Row and Column 10.—Imports increase an additional $160,400 as a result of extra production and consumption. The new sum of row 10 is $1,488,500; the new sum of column 10 is 1,793,500. The difference between the column and row sums is $305,000.

Let us look back over what occurred in the calculations that led to Table AG–9. There was extra demand for reservation products as a result of the agricultural project. This extra demand required that on-reservation production be increased. The increase of on-reservation production further increased the income of the community, causing more demand and more production. But in each round of this process, some of the extra income was saved, some was taxed, and some of the demand was for off-reservation products. Therefore, each round was smaller than the previous one. Through use of some equations that come from input-output analysis, it is possible to solve for the level of production which calls forth the demand for that production. The cycles damp down to one solution.

But we have not fully worked out all the consequences of the agricultural project. There is a surplus in the government accounts, in row and column 6, of $288,900. There is a total of $16,200 of savings on the reservation. Both of these can be expected to have additional repercussions. We could follow through the same procedure used to calculate the consequences of additional demand that were used to generate Table AG–8. In order to do so, we need to make assumptions about the decisions made by the governments and by investors.[5]

Now, let us answer the questions posed at the beginning of this section. Are other sectors on the reservation helped by the project? The total of all non-agricultural economic activity on the reservation had an increase of $130,600 in sales because of the project (row or column sum 7). Of this $75,500 was an increase of value added, representing an increase of reservation national product. Are other agricultural producers helped? Yes, as shown by the additional increase of $116,200 in agricultural sales in row and column 1. This additional production generated an additional $56,700 in value added, as shown by the entry in row 4, column 2 of Table AG–9.

How much of the additional income stays and how much is "leaked" out to the surrounding economy? This is two questions. First, what is the multiplier? The stimulus to the economy is the increase of value added due to the project, a total of $1,550,000, as shown by the sum of row 4 in Table AG–8. The outcome of the model used here, in which household consumption and the two production sectors are determined by behavioral assumptions, the total increase in value added is $1,677,200 as shown by the sum of row 4 in Table AG–9. An income multiplier is the ratio of these, 1.08. This is a small number that is greater than one.

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[5] Governments receive an extra 288,900; on-reservation saving is $16,200. The sum to 305,100, which except for rounding error is the surplus on the rest-of-the-world account. One could easily achieve overall balance by assuming that all federal receipts are transferred off the reservation, that the tribal government purchases off-reservation products with its surplus, and that all investment consists of purchasing imported capital goods. This may appear extreme.

An alternative would be to expand the A matrix by adding a row and column for government and for investment. The contents of these columns would be determined by marginal shares as is done in the current A matrix. Then calculations such as those in Table AG–12 could be made, and balance recalculated. Of course, this would assume a linear structure, a possible error for all the sectors. Extending the model in some nonlinear way requires some complicated work that goes beyond the purpose of this study. The goal here is to illustrate the repercussions of a project in a social accounting matrix; I do not want to advocate a linear underlying model.

How much of the effects of the projects go into the surrounding economy? Households increase their imports by $233,100 in Table AG–8, and by an additional $62,900 in Table AG–10. Out of a total increase of $1,677,200 in reservation value added, there is an increase of imports for consumption of $296,000. Total imports rise by 1,488,500.

J. SUMMARY

The main purpose of this chapter is to show the many ways that a project can be evaluated when there are a variety of points of view. Section 4.B and Tables AG–1 and AG–3 displayed the data. Section 4.A shows that one could compute the discounted cash flow using either constant or base year prices or by including the rate of inflation. Both approaches lead to the same results when the rate of inflation is constant during the life of the project. They lead to the same result because the constant-price version uses a real rate of interest derived from the rate of inflation and the money rate of interest. In this example, the real rate of interest is 9.26 percent.

The first calculation shows the return to capital without consideration of who receives it. The project gives a net increase of $550,000 in property income per year. Given the initial capital investment and the final value, the internal rate of return is 10.6 percent.

Since the project involves twenty-five individual operators of the agricultural process, the private cost-benefit analysis of these operators must be considered. Their private return depends upon the rent charged them for land and upon the terms of the loans they obtain for the purchase of equipment and animals. Three options demonstrate this fact. Because the operators receive a large portion of the profit from the project, their rates of return are high, being 30.8 percent for the lowest and 58.9 percent for the highest. The intermediate case, with a return of 39.4 percent, was chosen for analysis later with the social accounting matrix.

The next analysis examined tribal benefits and costs. The tribe can examine its income only, or it can include the income of its tribal members. The first approach shows low rates or return, varying from 6.1 percent to 9.75 percent. These low rates occur because there is some subsidy of operators involved and because the risk and return is borne by the individual operator. When individual cash flows are included, however, the rate of return rises to over 20 percent. The large increase is due both to including the operator's extra income and because of the extra benefit to reducing unemployment. Each of the farms employs one worker, who is assumed to be unemployed without the project. The increase in income for these workers is equal to their wage less taxes and less the transfer payments given up. Each worker has a net benefit of $8,620 per year.

The next analysis is that of the federal government. The federal government receives a benefit of $5,390 a year from the employment of the workers. This is the sum of reduced transfer payments, increased FICA payments and increased federal income tax payments. It also receives tax income from the operators in the second and third options. These positive returns yield an internal rate of return of 15.3 percent if the federal capital cost is equal to the AIDFC's contribution of 2.5 million dollars.

The American Indian Development Finance Corporation, in conducting a financial analysis, should perform all the calculations presented above. It should then calculate the overall social return, counting all benefits no matter who receives them. This analysis consists of adding the benefit from employment to the return to property income. There is a benefit of $900,000 a year for the thirty years of the project. The internal rate of return is about 18 percent.

The final section of the chapter shows how each of the year of the project would change the 10 by 10 social accounting matrix presented in chapter 3. The third of the three options is used for this exercise. The main result is that some additional income is created on the reservation because of the project. Value added on the reservation due to the direct effects of the project increased 1,550,000; but 200,000 of this is due to a reduction in leasing to non-Indians. Other value added on the reservation increased a total of $127,200 beyond the direct effects when additional interindustry and consumption demand is considered. This is about 8 percent of the increase due to the project. Although the number is a small percentage of the original stimulus, it still is a large enough effect to be worth examining.

CHAPTER IV—A MANUFACTURING PROJECT

This chapter presents an analysis of small manufacturing enterprise using social cost-benefit analysis project selection on an Indian reservation. The project is assumed to be a food processing plant which uses agricultural products of the reservation. See Fitch (1974) for some examples. As with the agricultural project, the assumed input structure will show inputs purchased on and off the reservation. This allows us to chart the direct and indirect effects of the project through use of a social accounting matrix. The chapter begins with a cost-benefit analysis.

A. DATA

Table MFG–1 presents the basic data for the manufacturing project. It is assumed to involve an investment of one million dollars in the base year. Annual sales are $1,460,000 per year. Intermediate products used as inputs are about 72 percent of the value of sales, $1,057,000. Value added is $403,000. A total of fifteen full-time workers are employed. The composition of the workforce and its pay is given in Table MFG–2.

TABLE MFG–1.—GENERAL DATA FOR A MANUFACTURING PROJECT

Item	Value
Capital cost	$1,000,000
Equity	750,000
Tribal	250,000
Individual	250,000
AIDFC	250,000
Loan (from AIDFC)	250,000
Annual income and expenses:	
Sales	1,460,000
Intermediate products on reservation	371,000
Agriculture	292,000
Manufacturing	50,000
Other sectors	29,000
Imported intermediate products	686,000
Valued added	403,000
Labor costs	225,120
Rent to tribal land	43,700
Gross profit	134,180
Loan service (r = .08)	22,207
Depreciation (straight-line)	33,333
Net profit	78,640
Salvage value in 30 years	100,000

TABLE MFG-2.—COMPOSITION OF LABOR FORCE

Type of worker	Annual salary	Fringe benefits	FICA tax	Total by worker	Total cost
Manager	$35,000	$3,628	$572	$39,200	$39,200
Supervisor (2)	20,000	1,960	440	22,400	44,800
Workers (12)	10,500	1,029	231	11,760	141,120
Total wage bill					225,120

The project is assumed to be financed with half of the funds coming from the AIDFC and half from tribal and private sources. The private sources are assumed to be individual Indians who are willing to invest in a project. These private contributions may seem high; one assumption could be that the on-reservation producers of agricultural products are interested in participating in the processing of their output. Although some might be non-Indians (as on an allotted reservation), all individual investors are assumed to be Indians in what follows. If there are 25 such individuals, the average contribution would be $10,000. The AIDFC contribution is half as an equity participant and half as a loan. Given that the split of the equity investment is one-third to each source, the net profits of $78,640 is split three ways. All of the depreciation allowance is available to the enterprise for reinvestment, and the owners retain shares proportional to their equity in the value of any profits attributable to the reinvested depreciation allowance. Because one-third of the equity is tribal and one-third is Indian, it is assumed that no corporate profit tax is assessed.

Table MFG-3 gives the previous incomes of the labor force employed by the project. It is assumed that the manager and the two supervisors earn the same income as they would without the project. (The manager may or may not be a tribal member. If this is a tribe which finds it difficult for one of the group to be in command, the manager and the supervisors may all be non-Indian.)

TABLE MFG-3.—PREVIOUS INCOME OF LABOR FORCE

	Annual income	Annual welfare or unemployment insurance
Manager	$35,000	
Supervisors	20,000	
Workers:		
Employed (7)	10,500	
Unemployed (5)		$3,000

The workers, twelve in all, are assumed to be in one of two situations without the project: Either employed at the wage offered by the new plant, or unemployed and drawing transfer income of $3,000 per year. The source of the transfer income might be unemployment compensation, Aid for Development Children under the unemployed parent program, or some other welfare program funded by the federal government, such as food stamps.

Table MFG-4 gives the taxation situation for each of the employed workers. Since only the additional taxes for the unemployed workers will matter in calculation of social benefits, all of this table is not required for the cost-benefit analysis. But it helps to lay out the whole picture for use later in the calculation of impacts with a social accounting matrix. Two types of taxes are important, the FICA tax, which is employees' and employers' contributions for social security, and the federal income tax. Both taxes must be paid by Indians when they work; but if the wage is low and a worker has many dependents, the federal income tax may be zero.

Table MFG-4.—Taxes of individuals

I. Assumptions	
A. FICA	
Total rate is .088 of wage	
Firm pays 1/4. or .22	
Individual pays 3/4, or .066	
Maximum taxable wage is $26,000	
B. Federal income tax	
Standard deduction is $3,400	
Tax tables of 1980 apply	
II. Calculations of Taxes and Disposable Incomes	
A. Manager:	
Total income	35,000
Estimated deductions	5,000
Taxable income	30,000
Tax, with three dependents	4,945
FICA tax	1,716
Total taxes	6,661
Disposable income	28,339
Disposable income + fringes	31,967
B. Each supervisor:	
Total income	20,000
Standard deduction	3,400
Taxable income	16,600
Tax, with three dependents	1,430
FICA tax	1,320
Total taxes	2,750
Disposable income	17,250
Disposable income + fringes	19,210
C. Each Worker:	
Total income	10,500
Standard deduction	3,400
Taxable income	7,100
Income tax, with two dependents	102
FICA tax	693
Total taxes	795
Disposable income	9,705
Disposable income + fringes	10,734
D. All individual investors:	
Annual share of profits	26,213
Distributed share of profits, assuming 50 percent is distributed	13,109
Assumed average marginal tax rate	.10
Total income tax on distributed profit	1,311

The social security payroll tax has a percentage which is paid by the employer and a percentage paid by the worker. For this example, the total tax is assumed to be 8.8 percent of the wage rate; 2.2 percent is paid by the employer, and 6.6 percent is paid by the worker. The maximum tax is that due on wage of $26,000.[1] Wages above that income are not charged a FICA tax. Although these tax rates and the upper limit are only partly true at present and will probably change in the next thirty years, for the purposes of this illustration these numbers will be used as if they apply during the entire term of the project.

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[1] These FICA figures are not the actual ones applicable today and unemployment compensation reserves are excluded.

The major provisions of the federal income tax are the deduction of certain types of expenditure, and a deduction for each dependent in a family. It is assumed that the manager itemizes his deductions, for a total of $5,000 worth of deductions. The supervisors and the workers all take the standard deduction. The supervisors each have three dependents. The workers each have two dependents. Using the tax tables, then, one can look up the tax paid by each type of employee after the deductions have been subtracted from income to give taxable income, which is then taxed.

Since we are particularly concerned with the taxes paid by the previously employed workers, those figures will be reviewed here. Each worker earns $10,500. He takes a standard deduction of $3,400, for a total taxable income of $7,100. If he has two dependents, a wife and a child, and no other income, then according to the tax tables, this worker's income tax would be $102. His share of the FICA tax would be $693.

If the worker were a single parent, or had a spouse who also worked, the tax calculation for the income tax would be different. In a real situation, one would have to attempt to have a representative selection of the family positions of workers who would gain employment because of a project. Small families are used here in order to have the workers pay some federal income tax; with *two* children and a wife, a person earning $10,500 in 1980 and taking the standard deduction would pay no income tax. Another factor to take into account is that over a period of 30 years, the family structure of workers would change; children would grow up, for instance. This and other similar complications are left out of this example.

The previously unemployed workers received $3,000 a year when out of work. With work, their after-tax take-home pay is $9,705. In addition, they receive fringe benefits worth $1,029 per year. The net benefit of working is therefore the sum of $9{,}705+1{,}029=10{,}734$, less the decrease in transfer payments of $3,000, for a net benefit of $7,734 per year. This figure will be used below in calculating the social rate of return. The reduction of transfer payments and the increase in tax revenue will be used for calculating the effect on the budget of the federal government.

B. THE RETURN TO CAPITAL ALONE

The ratio of sales value to capital cost is high. The basic profitability of the project is also high. This is explored in Table MFG–5. That table shows that this project looks good from the point of view of profit alone. The present value at the real rate of interest of 9.26 percent is $354,364, and the internal rate of return is 14.2 percent. We should expect that this project will show a profitable return in each of the viewpoints to be considered.

Table MFG-5.—Return to capital alone

Capital outlay	$1,000,000
AIDFC	$500,000
Tribe	$250,000
Individuals	$250,000
Annual increase in property income	$134,180
Gross profit	$134,180
Final salvage value	$100,000
Discounted cash flow results	
Number of periods	30
Net present value at 9.26 percent	$354,364
Internal rate of return (percent)	14.12

C. TRIBAL ANALYSIS

Table MFG–6 gives the analysis of tribal returns from a tribal government's financial point of view and from a social point of view. The tribe invests $250,000 in the project as an equity investor. As such, it obtains one-third of the seats on the board of directors, or proportionately more if the AIDFC takes less than its full share. The tribe also obtains one-third of the cash flow.

Table MFG–6.—Tribal discounted flow analysis

I. Data:	
Capital outlay	$250,000
Annual benefits:	
Tribal:	
One-third of cash flow	$37,324
Rent of land (5 years)	$43,700
Individual:	
Additional income to unemployed workers ($7,734 each for 5 workers)	$38,670
Final value:	
Tribal share, one-third	$33,333
Individuals share, one-third	$33,333
II. Tribal only:	
(1) Cash flow only:	
Net present value at 9.26 percent	$127,122
Internal rate of return (percent)	14.7
(2) Cash flow and rent for 5 years:	
Net present value at 9.26 percent	$295,959
Internal rate of return (percent)	27.1
III. Tribal and individual workers:	
(3) Cash flow and wage income:	
Annual benefit for 30 years	$75,994
Final value	$33,333
Net present value at 9.26 percent	$515,420
Internal rate of return (percent)	30.4
(4) Cash flow, rent, and wage income	
Annual benefit, 1st 5 years	$123,294
Annual benefit, next 24 years	$75,994
Annual benefit, final year	$109,327
Net present value at 9.26 percent	$684,258
Internal rate of return (percent)	45.2
IV. Tribe, workers, and individual investors:	
(5) Cash flow, rent, and wage income:	
Total capital outlay	$500,000
Annual flow of benefits, rent excluded	$112,007
Tribal equity share	$37,324
Net wage benefit	$38,670
Individual equity, after tax	$26,013
Additional rent for 5 years	$43,700
Final salvage value	$66,667

Net present value at 9.26 percent	$798,216
Internal rate of return	27.7

V. Calculations explained (I use a Hewlett-Packard 38C; the HP symbols are used below.)

I(1) Since this has the same cash flow for each year, the financial interest keys are used. PMT=37,324; i=9.26; n=30; FV=33,333; these give PV=377,122. The difference between PV and 250,000 gives net present value of $127,122.

II(2) This requires using the discounted cash flow keys.

Initial payment, CF(0)	−$250,000
1st 5 years, CF(1)	$81,024
n(1)	$5
Next 24 years, CF(2)	$37,324
N(2)	$24
30th year, CF(3)	$70,657
n(3)	$1
Net present value at 9.26 percent	$295,959
Internal rate of return (percent)	$46.7

III(3) This is calculated as in II(1), with an annual payment of $15,994.

III(4) Discounted cash flow keys:

Initial payment, CF(0)	−$250,000
1st 5 years, CF(1)	$119,694
n(1)	$5
Next 24 years, CF(2)	$75,994
N(2)	$24
30th year, CF(3)	$109,327
n(3)	$1
Net present value at 9.26 percent	$684,258
Internal rate of return (percent)	45.2

IV(5) Discounted cash flow keys:

Initial payment, CF(0)	−$500,000
1st 5 years, CF(1)	$155,707
n(1)	$5
Next 24 years, CF(2)	$112,007
N(2)	$24
30th year, CF(3)	$178.674
n(3)	$1
Net present value at 9.26 percent	$798,216
Internal rate of return (percent)	28.7

Whether or not this cash flow is distributed to the equity owners, it is valued here at the time it is earned. If reinvested, the further return is assumed to be irrelevant to the analysis of this project. We will not enter into assumptions here about the sufficiency or insufficency of community saving, or the greater or lesser tendency of the tribal government or a project to reinvest rather than to consume.

The assumption that depreciation schedules will be kept, and that depreciation will be available for investment, it is itself subject to criticism. The main purpose of depreciation schedules is to calculate taxable income for the corporate income tax, which this project does not pay. The question of the physical deterioration of the equipment and structures in the plant is taken care of by its assumed decline in value to a salvage value of $100,000 at the end of the project. Routine maintenance required to keep the equipment operating is already included as costs of materials and labor. Properly considered, equity owners of this project would have to decide later whether further investment in the plant is wise; if so, then the cash flow kept as a depreciation allowance will be available for reinvestment. If the project does not prove to be a good place to expand, then the depreciation portion of the cash flow should be diverted to other investments or should be consumed. Suppose the plant proves to be profitable. Then owners may wish to extend the life of the plant beyond thirty years by using part of the cash flow to modernize and replace equipment before it "dies." Such decisions would be made later and are not part of this calculation, which applies only to the original decision to invest.

The issue of the rental value of tribal land occupied by the project is perhaps a difficult issue. Let us assume that this tribe owns an industrial park set up many years ago with help from the EDA. This park is now idle. If a new project is put on the park, it will occupy previously idle land. If so, the opportunity cost of the land is not the $43,700 charged to the project in Table MFG–1, but rather it is zero for the period in which the land would be idle if the project is not built. Now, what is the appropriate assumption? Is it reasonable to assume that an industrial park would idle for a full 30 years if this project is not undertaken? I make the assumption that by the end of five years, some other project would come along that could occupy the land and pay the rent of $43,700 a year. Therefore, the opportunity costs of the tribal land is zero for five years, but it is $43,700 a year after that. (Future plants, will, of course, have to be charged additional development costs if a new industrial site needs to be constructed just to continue increasing the capital stock on the reservation.)

Therefore, there is an additional $43,700 a year in benefits to the tribe from renting the land. This additional benefit is included as part of the discounted flow analysis. It has a present value of $168,837 using the real discount rate of 9.26 percent. That is, the present value of $43,700 a year for 5 years is $168,837. The net present value of the tribe's share of the equity for the full 30 years is $127,122. Including the extra benefit of renting idle land increases the tribal benefit by $295,959. In terms of internal rate of return, inclusion of the rent increases the rate of return from 14.7 percent to 27.1 percent. These two cases are given as cases (1) and (2) in Table MFG–6.

The tribe should also consider the benefits from employment. The after-tax and after-loss-of-transfers increase of income is $7,734 (fringe benefits included) for each of the 5 workers who are no longer unemployed after the project is built. This is a total of $38,670 per year. Over 36 years, the present value of this benefit is $388,299. When this benefit is included in the cash flow along with the equity return and the rent for five years, the internal rate of return rises from 27.1 to 45.2 percent. The project looks quite good with these numbers.

One should raise the same objection to the assmption that five workers would be unemployed for the full thirty years as was raised in regard to the industrial land. Perhaps a project will come along and employ the five workers. A difference is that population growth in a community means that the labor force steadily increases. The size of the industrial park is a constant. It seems reasonable to assume that even with the additional jobs which would occur in five years should the industrial park become full there would remain unemployment which would not exist if this plant is built.

In summary, four different possible ways to calculate the benefit from the tribal point of view have been presented so far. These four combinations are listed in Table MFG-6, as follows:

(1) Financial return alone has a present value of $127,122 and an internal rate of return of 14.7 percent.

(2) Financial return and five years of additional rental income increases the present value by $168,837, and gives a total net present value of $320,300. The internal rate of return rises to 27.1 percent.

(3) Financial return plus the value of extra wage income gives a total of $515,420 in present value and an internal rate of return of 30.4 percent.

(4) If all three returns are used, the present value of the project for the tribe is $684,258 and the internal rate of return is 45.2 percent.

An additional consideration is the income of individual Indians who invest in the project. As a social analysis, the tribe's analysis should also consider the private returns earned by individual investors. If those investors could obtain only returns at the real rate of interest of 9.26 percent, then additional returns should be considered as benefits of investing in this [good] project. One way to do this is to calculate the present value of the project using the private equity returns. This could get complicated because of the taxation issue on private incomes. The private investors have an opportunity cost. If it is 9.26 percent after tax, then the additional tax is a cost from the individual's point of view and should not be counted as a benefit. For this example, I assume that the after-tax rate of return for alternatives is 9.26 percent for individuals. Therefore, the total benefit to investors is $63,013, and they pay a tax of $1,311. The sum of these two figures is one-third of the distributed profits, $37,324. Calculation IV(5) in Table MFG-6 shows that the total return has a present value of $798,216 and an internal rate of return of 28.7 percent. The internal rate of return falls dramatically because the capital cost is doubled when the private investors' $250,000 is included. The cash flow of the project only rises by $36,013.

D. THE FEDERAL VIEWPOINT

The net effect on the federal government is the result of employing workers and the additional tax on profit. The effect of the workers' obtaining jobs is laid out in Table MFG-7. There is a decrease of $15,000 in transfer payments. There is an increase of $4,620 in Social Security (FICA) payroll taxes at $924 per worker, and an increase of $510 in federal income taxes at a tax of $102 per worker. There is also an additional tax of $1,311 on profits distributed to individual investors. The total annual increase in the federal budget surplus is $21,441 per year. The present value of this flow of income for thirty years is $215,296. The internal rate of return cannot be calculated without capital costs for the federal government. This could be done if the federal government takes into account the investment by the AIDFC in the project. The appropriate number to use would be the federal government's share in the capitalization of the AIDFC. This exercise is not included here, since the AIDFC analysis in the next section will also include the federal government's benefit in its analysis.

Table MFG-7.—Change in Government budget

Additional workers (5):	
Decrease in transfer payments	$15,000
Additional taxes	$5,130
FICA tax (10,500*.088*5)	$4,620
Income tax (102*5)	$510
Additional tax on distributed Profit	$1,311
Total annual increase in budget surplus	$21,441
Discounted cash flow:	
Number of periods	30
Rate of interest (percent)	9.26
Net present value	$215,296

I have not assumed that as a result of the project, the budget of the federal government on the reservation is reduced. Such a result would be analogous to the decrease in welfare expenditures for the employed workers. For instance, one of the fringe benefits on the job might be a health insurance plan for workers. If the plan offers better coverage than the Indian Health Service, then workers would shift their demand for medical services from the IHS to private providers. This might or might not lead to a reduction in the IHS budget, however; it might instead merely shorten waiting periods. There would still be a social benefit, for those tribal consumers of medical care who receive better or faster service.

E. THE AIDFC ANALYSIS

Table MFG-8 gives the various calculations from the point of view of the AIDFC. There are two such calculations, one for the private or financial rate of return, based upon the AIDFC's participation as an equity owner and as a lender. The second is a social cost-benefit analysis in which all the social returns, tribal, individual, and federal, are taken into account along with the entire capital cost.

Table MFG-8.—AIDFC analysis

I. Financial:	
Total capital investment of AIDFC	$500,000
Number of periods	30
Annual cash flow	$59,531
Loan amortization	$22,207
Equity share	$37,324
Share of salvage value	$33,333
Net present value at 9.26 percent	$100,110
Internal rate of return (percent)	11.5
II. Social:	
Total capital outlay	$1,000,000
Number of periods	30
Annual flow of benefits	$192,979
Tribal equity	$37,324
Individuals	$74,683
Equity	$36,013
Wages	$38,670
Increase in Federal budget surplus	$21,441
AIDFC's share	$59,531
Equity	$37,324
Loan	$22,207
Tribal rental income, first 5 years	$43,700
Final or salvage value	$100,000

Net present value at 9.26 percent, all benefits included	$1,126,786
First 5 years' benefits	$236,679
Next 24 years' benefits	$192,979
Final year's benefits	$292,979
Internal rate of return, all benefits included (percent)	22.1

The financial return to the AIDFC is a result of a total costs of $500,000, half of which is a loan and half an equity share. There is an annual return of $59,531, the sum of the loan amortization and one-third of the annual cash flow. In addition, the AIDFC receives one-third of the salvage value of $100,000. The present value of the flow of income is $600,110; after subtracting the capital cost, the net present value is $100,110. The internal rate of return for this package is 11.5 percent.

Now we turn to the calculation of social benefits and costs from the AIDFC's point of view. The total capital outlay in $1,000,000. The annual flow of benefits is the sum of a number of entries. First, all of the annual cash flow is included in one way or another. The tribal share of the cash flow enters directly, and has been discussed above. The AIDFC share also is discussed above. The total benefit to individuals is $75,994. The annual benefit to the federal government is $21,441. The total of the annual benefit flows which run for the full 30 years is $192,979. In addition, the first five year's benefit of $43,700 from renting tribal land needs to be included. The total net present value of these benefits (less the initial capital cost) is $1,126,786. The internal rate of return is 22.1 percent.

F. IMPACT ON RESERVATION ACCOUNTS

The previous five sections of this chapter have presented a discounted cash flow analysis of a project that is one-fifth the capital cost of the agricultural project presented in Chapter 4. The social rate of return for each project is high. As shown in Table AG-7, the AIDFC's social analysis of the agricultural project gives a return of 18 percent. Table MFG-8 shows that the social rate of return on the manufacturing project is 22 percent. Both projects featured social return due to the employment of previously unemployed workers. The manufacturing project, however, also employed land in an industrial park.

This section considers impacts on the structure of the reservation economy using the imaginary 20 by 20 social accounting matrix example from Chapter 3. As with the agricultural project, two direct impacts are examined: The demand for more reservation-produced inputs, and the additional consumption demand caused by the earnings of workers and tribal investors. As the examples have been created, the manufacturing project has a much more dramatic impact on the reservation economy, in spite of being smaller than the agricultural project. The reason is that the manufacturing project purchases many inputs from the reservation. The expansion of production to provide those inputs creates much additional income.

For the agricultural project, the income multiplier was 1.08; each dollar of value added created on the reservation generated an additional 8 cents of income. For the manufacturing project, the income multiplier is 1.53; for each dollar of value added created on the reservation, an additional 53 cents is added to reservation income. The agricultural project induces an added $127,200 in income. The manufacturing project induces an additional $213,400 in income.

Table MFG–9 presents the direct impact of the project. Table MFG–10 presents the induced impact of the project. Table MFG–11 is the sum of Tables MFG–9 and MFG–10; it summarizes the impact and shows remaining inbalances in the 20 by 20 SAM. The remaining nine tables of the chapter explain how Table MFG–10 was derived from Table MFG–9 and the 20 by 20 SAM presented in Table SAM–9. Since the derivation is complicated, most readers may wish to skip the explanations of Tables MFG–12 through MFG–20. The method used is solution of an input-output model, as in Chapter 4. But the model is larger and therefore more complicated. Noneconomists should not be worried if they find the methods difficult to understand.

SAM impacts: results

Table MFG–9 takes the data from the project and enters the numbers in the appropriate places in the 20 by 20 social accounting matrix of Chapter 3. In addition, there are some further assumptions. Here are the major elements of the changes:

Table MFG-9
Direct Effects of the Manufacturing Project

EXPENDITURES

RECEIPTS

	PRODUCTION ACTIVITIES							INSTITUTIONS									CAPITAL					
								FIRMS			GOV'TS			FACTORS								
	Agri. (1)	Mining (2)	Mfg. (3)	Housing (4)	Other (5)	Gov't Ind. (6)	Imp'ts (7)	Prvt (8)	Trib (9)	H'hlds (10)	Fed. (11)	Trib (12)	Labor (13)	S-Empl (14)	Priv (15)	Trib (16)	Firms (17)	H'hlds (18)	Gov't (19)	Rest of World (20)	TOTAL	
PRODUCTION																						
(1) AGRICUL.			292							2.5											294.5	(1)
(2) MINING																					0	(2)
(3) MFTG.			50							4.7										1460.0	1514.7	(3)
(4) HOUSING										6.3											6.3	(4)
(5) OTHER			29							7.6											36.6	(5)
(6) GOV'T IND.																					0	(6)
(7) IMPORTS										89.7											89.7	(7)
INST.																						
FIRMS																						
(8) Private																						(8)
(9) Tribal			403																		403.0	(9)
(10) HOUSEHOLDS													140.2		13.1					-15.0	138.3	(10)
GOVERNMENT																						
(11) Federal								-1.6	4.2	17.4											20.0	(11)
(12) Tribal																56.8					56.8	(12)
FACTORS																						
(13) Labor								-80.7	220.9												140.2	(13)
(14) S-Empl.																					0	(14)
(15) Prvt. Cp.& Ld.									13.1												13.1	(15)
(16) Trbl. Cp.& Ld.									56.8												56.8	(16)
CAP. ACCTS.																						
(17) FIRMS									108.0											-35.3	72.7	(17)
(18) HOUSEHOLDS										10.0										- 6.1	3.9	(18)
(19) GOVERNMENT																						(19)
(20) REST-OF-WORLD			686				89.7														775.7	(20)
TOTALS			1460				89.7	-82.3	403.0	138.3			140.2		13.1	56.8				1403.6		
IS BALANCE MAINTAINED?	NO	YES	NO	NO	NO	YES	YES	NO	YES	NO	NO	NO	YES	YES	YES	YES	NO	NO	YES	NO		

Table MFG-10
Some Induced Effects of the Manufacturing Project

EXPENDITURES

RECEIPTS

	PRODUCTION ACTIVITIES							INSTITUTIONS									CAPITAL					
								FIRMS			GOV'TS			FACTORS								
	Agri. (1)	Mining (2)	Mfg. (3)	Housing (4)	Other (5)	Gov't Ind. (6)	Impts (7)	Prvt (8)	Trib (9)	H'hlds (10)	Fed. (11)	Trib (12)	Labor (13)	S-Empl (14)	Priv (15)	Trib (16)	Firms (17)	H'hlds (18)	Gov't (19)	Rest of World (20)	TOTAL	
PRODUCTION																						
(1) AGRICUL.	25.5		.1	.3	.9					2.6											29.3	(1)
(2) MINING			.4																		.4	(2)
(3) MFTG.	11.4	.007	5.0	.5	2.1					4.9											23.6	(3)
(4) HOUSING	.3		.7	.1	.3					6.6											6.6	(4)
(5) OTHER	3.0	.009	.9	.1	.8					7.9											12.7	(5)
(6) GOV'T IND.																						(6)
(7) IMPORTS										93.6											93.6	(7)
INST.																						
FIRMS																						
(8) Private	98.2	.1	24.2	6.1	16.9																145.6	(8)
(9) Tribal	45.7	.1	11.2	2.9	7.8																67.8	(9)
(10) HOUSEHOLDS													122.9	21.1	7.0						151.0	(10)
GOVERNMENT																						
(11) Federal								8.9	3.6	24.9											37.4	(11)
(12) Tribal																						(12)
FACTORS																						
(13) Labor								87.8	35.1												122.9	(13)
(14) S-Empl.								21.1													21.1	(14)
(15) Prvt. Cp.& Ld.								7.0													7.0	(15)
(16) Trbl. Cp.& Ld.																						(16)
CAP. ACCTS.																						
(17) FIRMS								20.8	29.1											-37.4	12.5	(17)
(18) HOUSEHOLDS										10.5										- 6.4	4.1	(18)
(19) GOVERNMENT																						(19)
(20) REST-OF-WORLD	139.7	.14	36.1	4.3	20.6		93.6														294.4	(20)
TOTALS	323.8	.4	78.7	14.2	49.3		93.6	145.6	67.8	151.0			122.9	21.1	7.0					-43.8		

Table MFR-11
Sum of Direct and Induced Effects of the Manufacturing Project

EXPENDITURES

RECEIPTS

	PRODUCTION ACTIVITIES							INSTITUTIONS									CAPITAL				
								FIRMS			GOV'TS			FACTORS							
	Agri. (1)	Mining (2)	Mfg. (3)	Housing (4)	Other (5)	Gov't Ind. (6)	Impts (7)	Prvt (8)	Trib (9)	H'hlds (10)	Fed. (11)	Trib (12)	Labor (13)	S-Empl (14)	Priv (15)	Trib (16)	Firms (17)	H'hlds (18)	Gov't (19)	Rest of World (20)	TOTAL
PRODUCTION																					
(1) AGRICUL.	25.5		292.1	.3	.9					5.1											323.9 (1)
(2) MINING			.4																		.4 (2)
(3) MFTG.	11.4	.007	55.0	.5	2.1					9.6										1460	1538.6 (3)
(4) HOUSING	.3		.7	.1	.3					12.9											14.3 (4)
(5) OTHER	3.0	.009	29.9	.1	.8					15.5											49.3 (5)
(6) GOV'T IND.																					(6)
(7) IMPORTS										183.3											183.3 (7)
INST.																					
FIRMS																					
(8) Private	98.2	.1	24.2	6.1	16.9																145.6 (8)
(9) Tribal	45.1	.1	414.2	2.9	7.8																470.8 (9)
(10) HOUSEHOLDS													263.1	21.1	20.1					-15.0	289.3 (10)
GOVERNMENT																					
(11) Federal								7.3	7.8	42.3											57.4 (11)
(12) Tribal																56.8					56.8 (12)
FACTORS																					
(13) Labor								7.1	256.1												263.2 (13)
(14) S-Empl.								21.1													21.1 (14)
(15) Prvt. Cp.& Ld.								7.0	13.1												20.1 (15)
(16) Trbl. Cp.& Ld.									56.8												56.8 (16)
CAP. ACCTS.																					
(17) FIRMS								20.8	137.1											-72.7	85.2 (17)
(18) HOUSEHOLDS										20.5										-12.5	8.0 (18)
(19) GOVERNMENT																					(19)
(20) REST-OF-WORLD	139.7	.14	722.1	4.3	20.6		183.3														1070.1 (20)
TOTALS	323.8	.4	1538.7	14.2	49.3		183.3	63.3	470.9	289.3			263.1	21.1	20.1	56.8				1359.8	
IS BALANCE MAINTAINED?	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	NO	NO	YES	YES	YES	YES	NO	NO	YES	NO	

1. The additional exports from the project are $1,460,000, entered in the rest-of-world column of the manufacturing row. The inputs for making this output is entered in column 3. Many inputs are purchased from agriculture, 292,000. There are two other additions in the "A" block, $50,000 in manufacturing demand and $29,000 in demand from all other production activities. There is an increase in the "Y" block, 403,000 in additional value added.

2. The additional value added is distributed to institutions in the "D" block. There are a number of transfers occurring in that block. Their effect is to increase household income by $138,300. Since not all of the workers were unemployed before the project, the transfer of these workers to the project does not increase household income. This is shown by having payments to labor by private firms fall by the wage cost of the seven workers who had been employed. FICA payments by firms to the federal government also decrease. Household income increases because of the return of the supervisory personnel to the reservation and employment of the unemployed workers. There is a reduction, however, in transfers to households from off the reservation due to a decline in welfare payments.

3. The increase in household income is $138,300. This goes to taxes, saving, and consumption, as shown in column 10. Income and social security taxes total $17,400 on the new wage income and the new property income. New saving is $10,000. The remainder is consumed.

Table MFG-10 shows the consequences of the additional demand for on reservation production which is shown in columns 3 and 10 of Table MFG-9. The following is the change in demand which must be accommodated:

Agriculture: 292,000+2,500=294,500
Manufacturing: 50,000+4,700=54,700
Housing: 0+6,300=6,300
All Other: 29,000+7,600=36,600

In each sector, the first of the figures is the demand from the project. The second is the consumption demand caused by the additional income of households. Table MFG-10 shows the consequences of fulfilling this extra demand completely by increasing output in each of the production sectors on the reservation.

Such increases in output will further increase demand. An increase in the production of agricultural products will require some products of manufacturing. It will also produce some additional income for farmers. The purpose of Table MFG-10 is to show the results in the SAM of changing everything to respond to the additional demand. The following changes should be noted:

1. In the "A" block, there is additional demand from each production sector for the output of other sectors. Even mining is slightly affected. Most notable is the increase in intermediate demand for the output of agriculture. In addition to the extra $294,500 demand in the previous table, this table shows a further need for $29,300 worth of agricultural output. When this is added to the previous demand, a total increase of $323,800 occurs in on reservation agricultural output. This is shown as the sum of column 1.

In the "Y" block, there is considerable increase in value added paid to firms for distribution to factors in the "D" block. A total of

$143,900 is created for private and tribal firms in agriculture. The other large increase is in manufacturing, which provides an additional $35,400 of value added.

3. There is a substantial increase in imports by each of the production sectors and by demand from consumers. The "M" block shows this in row 20.

4. The "D" block shows a variety of transfers among institutions. Income enters this block by way of columns 8 and 9. Firms pay taxes to governments, wages to labor, income to self-employment, and to private capital and land. The payments to factors of production are then transferred to households as expenditures of columns 13, 14, and 15 in the tenth row. The total increase in household income is $151,000, as shown by the sum of row 10.

5. Households increase their consumption, as shown in column 10 of the "C" block. By far the greatest amount of consumption is for imported goods. But there is some demand for output from four of the five production activities on the reservation.

6. There is also some action on the capital accounts. Firms are assumed to retain some earnings, as shown in row 17; households also save, as shown in row 18. Both invest in off-reservation institutions, as shown in column 20 of those rows. But some is retained on the reservation, as shown by the fact that the row sums are positive. No assignment of the saving to particular types of investment demand is made in this table, however.

The general patterns of changes in Table MFG–10 are the same as were shown in the agricultural example. Increases in demand for reservation production in turn create additional demand because of the increase in household income. Some tax payments also increase. The induced increase in reservation income is quite large. It is shown by the sum of all the entries in the "Y" block. They sum to $213,400, shown by the sum of rows 8 and 9.

The consequence is that there is a large income multiplier. An injection of $403,000 in income leads to this additional $213,400 in income due to the interindustry demand for agricultural goods and for manufactured goods. This example shows why it is important to know the interindustry relationships of a reservation and of a project in order to calculate its effects.

But one large assumption has been made: all of the demand by the manufacturing plant is met by new production. What if some of it is met by reduced exports? The original presentation by the 20 by 20 example is in Table SAM–9. There are a total of $4,460,000 worth of exports from agriculture in that table. Conceivably, the entire demand of $292,000 from the manufacturing plant could be met from existing production. If this is true also of the demand for other sectors, then the extra demand listed above might actually be zero! In this case, the entire contents of Table MFG–10 would also be zero. In Table MFG–9, offsetting decreases in the exports of each sector could be entered, causing the new row sums to remain unchanged. Truth probably would lie between these extremes.

Table MFG–11 is simply the sum of the previous two tables. It shows which rows and columns are in balance and which are not in balance after taking into account induced changes in production levels. All of the production sectors are in balance, as are the factor payments and the households. Some imbalances remain.

Nothing has been done to expenditures by governments, although their receipts have changed. No specific investments have been indicated for the savings which remain on the reservation in the capital accounts. No effort has been made to identify the consequences of reducing employment by private firms when seven workers move to the new manufacturing project.

Although consideration of the various changes which should be explored in the 20 by 20 SAM might be very fruitful, they are not pursued here. The purpose of introducing a social accounting matrix in this work was to show that a project should not be considered in isolation. It will have effects on other parts of a reservation economy. Although these effects may be difficult to predict, a social accounting matrix helps one know where to look. In this case, we look toward the composition of the agricultural imputs for the project, to see if they will be met by new production or by reduced exports. We look to the activities of the firms which lose workers, to see if they will perhaps hire unemployed Indians. This would be "trickle down" at work. We might look at the investment plans of the firms which obtain additional retained earning.

SAM impacts: computations

The main points about the use of a SAM have been made in the previous section. This section shows how the figures in Table MFG-10 were derived. Readers without training in input-output economics should not be surprised to find the following very difficult. First, a 6 by 6 input-output model of the economy is constructed. The six sectors are the five production sectors and households disposable income. Households are treated like a production activity; they sell labor to the production activity, and their consumption purchases are treated as intermediate purchases like the purchases of production activities from one another.

The additional demand from Table MFG-9 is then applied to the 6 by 6 input-output model, giving the levels of production which are needed to meet the new demand and all demand that is induced by the new demand.

Although the intermediate demands and household demand have been calculated, the job is not finished. The additional production generates other components for value added besides that received by households. Further assumptions are made about the distribution of value added to governments and savings. The result is entries for other parts of Table MFG-10. All of the details excepts for the matrix multiplications are laid out in the remaining nine tables. The descriptions of these tables follow.

Table MFG-12.—This table was constructed with two steps. First, the proportions in the first column were taken from the household column of Table SAM-9. All consumption of on and off-reservation products were added to saving, and the result scaled to sum to one by dividing through by the sum. Second, an assumed marginal tax rate of 17 percent was applied. This tax rate is above the average rate shown in the SAM. The important point here is that the marginal budget shares in the second column are not equal to the average budget shares in the original data. One should expect them to differ, not only because tax rates differ, but because the effect of income on the desire for goods varies. One's purchases of food, for instance, falls as a proportion of total spending as one's income rises.

TABLE MFG–12.—MARGINAL BUDGET SHARES OF HOUSEHOLDS

	Spending out of disposable income	Spending out of income with tax rate=.17
On-reservation purchases:		
Agricultural products	.0208	.0173
Mining products	0	0
Manufacturing products	.0391	.0325
Housing	.0522	.0433
Other products and services	.0620	.0520
Imports to reservation	.7421	.6159
Saving:		
On reservation	.0327	.0271
Off reservation	.0505	.0419
Federal taxes	0	.17
Total	1.000	1.000

Table MFG–13.—This table applies the data in Table MFG–12 to the increase in income taken from the project data. The change in income is the sum of changes in disposable income, plus fringes, of the five unemployed workers, the manager, and the two supervisors. The first figure, $138,300, is the change in income less the $15,000 in transfer payments given up by the workers. Then income and social security taxes are subtracted. The receipt of distributed profits is included in income. It is significant to note that fringes are included. If they were not, then there would be a difference between the books of the households sector and those of the firms in the SAM. The data of the first column is applied to $120,853 to obtain the changes in consumption and saving.

TABLE MFG–13.—CHANGE IN CONSUMER EXPENDITURE DUE TO ORIGINAL CHANGE IN DISPOSAL INCOME

	Marginal budget share	Expenditure amount
Change in income		$138,300
Less taxes		−17,447
Change in disposable income		120,853
Expenditures:		
Agriculture	.0208	2,514
Mining	0	0
Manufacturing	.0319	4,725
Housing	.0522	6,309
Other	.0626	7,565
Imports	.7421	89,685
Saving on reservation	.0327	3,952
Saving off reservation	.0505	6,103

Table MFG–14.—This table computes the exogenous change in demand that is applied to the input-output model. There is a change in each of the five production sectors, except mining, and no change in demand for households directly.

TABLE MFG-14.—CALCULATION OF ORIGINAL CHANGE IN FINAL DEMAND

[In thousand of dollars]

Sector	Cons. demand	Project demand	Total
Agriculture	2.514	292.0	294.514
Mining	0	0	0
Manufacturing	4.725	50.0	54.725
Housing	6.307	0	6.309
Other	7.565	29.0	36.65
Household DI	0	0	0

Table MFG-15.—This table gives the column coefficients of the entire model. The first six rows give the coefficients for the six sectors which will be treated as endogenous. The remaining rows are calculated after the solution is known, using the proportions given here.

TABLE MFG-15.—COLUMN COEFFICIENTS OF THE MODEL

Selling account	Purchasing account				
	Agriculture	Mining	Manufacturing	Housing	Other
Agriculture	.0787	0	.001	.018	.018
Mining	0	0	.005	0	0
Manufacturing	.035	.018	.064	.035	.042
Housing	.00093	0.0	.0094	.00704	.0067
Other sectors	.00967	.0252	.0125	.0077	.0167
Households' after tax income	.258	.218	.261	.519	.290
Households' taxes	.053	.045	.054	.042	.060
Firms' retained earnings	.027	.065	.027	.014	.030
Firms' taxes	.027	.065	.027	.014	.030
Subtotal, value added	.444	.586	.045	.630	.500
Imports	.431	.370	.485	.301	.417
Total	1.0	1.0	1.0	1.0	1.0

Table MFG-16.—This table gives the technical coefficients of the input-output model. In the usual notation of such models, this is the A matrix of coefficients. (This work has used A to refer to the matrix of the flows rather than the matrix of the coefficients.) These numbers were taken from the first six rows of the previous table.

TABLE MFG-16.—TECHNICAL COEFFICIENTS MATRIX OF MODEL WITH HOUSEHOLD DISPOSABLE INCOME ENDOGENOUS

Selling account	Purchasing account					
	Agriculture	Mining	Manufacturing	Housing	Other	Households
Agriculture	.0787	0	.001	.018	.018	.0173
Mining	0	0	.005	0	0	0
Manufacturing	.035	.018	.064	.035	.042	.0325
Housing	.00093	0	.0094	.00704	.0067	.0433
Other sectors	.00976	.0252	.0125	.0077	.0167	.052
Household disposal income	.252	.218	.261	.519	.290	0
Subtotal	.382	.261	.353	.588	.374	.145

Table MFG-17.—This is the total requirements matrix. In the usual notation, this is the inverse if (I-A); where I refers to the identity matrix. Call the inverse R; call the change in demand dQ. Then the solution to the input-output model is R times dQ. The multiplication is matrix multiplication.[2]

TABLE MFG-17.—TOTAL REQUIREMENTS MATRIX OF MODEL WITH HOUSEHOLD DISPOSABLE INCOME ENDOGENOUS

Selling account	Purchasing account					
	Agriculture	Mining	Manufacturing	Housing	Other	Households
Agriculture	1.0936	0.0067	0.0094	0.0347	0.0289	0.0267
Mining	.0003	1.0002	.0054	.0003	.0003	.0002
Manufacturing	.0564	.0322	1.0843	.0666	.0625	.0510
Housing	.0183	.0136	.0264	1.0384	.0254	.0572
Other sections	.0313	.0419	.0340	.0462	1.040	.0695
Household disposable income	.3158	.2474	.3107	.5792	.3391	1.0702

Table MFG-18.—This table gives the result of the matrix multiplication of the change in demand given in Table MFG-14 and the total requirements matrix in Table MFG-17. The result is the second column. The first column is the change in consumption demand. It belongs in the next table, but is placed here because the next table is complicated.

TABLE MFG-18.—CALCULATED CHANGE OF CONSUMPTION AND OUTPUT, SECOND SET OF EFFECTS

[In thousands of dollars]

Sector	Consumption	Output
Agriculture	2.62	323.9
Mining	0	.4
Manufacturing	4.93	78.7
Housing	6.58	14.3
Other sectors	7.89	49.5
Household disposable income	0	126.1

Table MFG-19.—This table gives the flows for all the components listed and is derived from the column coefficients given in Table MFG-15. The sum of each of the five production columns is equal to change in production of each of the sectors. Table MFG-18 has given the five changes in output. Each of these is multiplied by the respective column to give the values in the table. For instance, the agricultural change in output is 323.9; the column coefficient for imports by agriculture in Table MFG-15 is .431. The product of these two numbers is 139.6. The entry in Table MFG-19 for imports in the first column is 139.7. The two numbers are different because of rounding error. (I used a computer package to do the arithmetic and then rounded the results for the tables.)

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[2] In this work, the idea of matrix multiplication and the entire input-output model apparatus is somewhat more complicated than I have in mind for the audience. I have chosen not to spell out the algebra. But a reference to a good exposition is needed. Perhaps I should spell it all out here, also. Comments are welcomed.

TABLE MFG-19.—CHANGES IN COLUMN COMPONENTS, PRODUCTION SECTOR SECOND SET OF EFFECTS

[In thousands of dollars]

Selling account	Purchasing account					
	Agriculture	Mining	Manufacturing	Housing	Other	Total
Agriculture	25.5	0	.08	.3	.9	26.7
Mining	0	0	.4	0	0	.4
Manufacturing	11.4	.007	5.0	.5	2.1	19.0
Housing	.3	0	.7	.1	.3	1.4
Other	3.0	.01	1.0	0.1	.8	4.9
Households' after tax income	83.6	.09	20.6	7.4	14.4	126.1
Households' taxes	17.1	.02	4.2	0.6	2.9	24.9
Firms' retained earnings	34.5	.1	8.5	0.8	5.9	49.9
Firm's taxes	8.6	.03	2.1	.2	1.5	12.5
Subtotal, value added	143.8	.24	35.4	9.0	24.7	213.1
Imports	139.7	.14	36.1	4.3	20.6	200.9
Total	323.9	.4	78.7	14.3	49.5	

Table MFG-20.—This table explains how two of the components of the column coefficients are moved into the SAM accounting framework. It seemed easiest to calculate household federal taxes and the firms' payroll and income taxes as separate rows. In addition, household disposable income was entered directly, without its connection to factors made clear. This table gives the proportions that were used to take the data in Table MFG-19 and transform it into the proper categories for the 20 by 20 SAM.

TABLE MFG-20.—ASSUMED DISTRIBUTION OF VALUE ADDED TO FACTORS AND FIRMS

	Proportions		Values	
	(8)	(9)	(8)	(9)
A. Households' after tax income:				
(13) Labor	.581	.233	87.8	35.1
(14) Self employment	.140		21.1	
(15) Private capital and land	.047		7.0	
Total	1.00		151.0	
B. Firms' retained earnings:				
(16) Firms' on reservation saving	.083	.167	4.2	8.2
(17) Firms' off reservation saving	.333	.417	16.6	20.8
Total	1.0		49.9	

This concludes a description of the procedure used to calculate the changes in Table MFG-10. The use of an input-output model means that some strong assumptions are made. First, the coefficients are assumed stable for the changes under consideration. Second, enough slack is assumed present that bottlenecks or price changes do not occur. The bottleneck problem is the more important one in the present context. Prices will probably be unaffected, since reservations are not large economic forces. But the quantity issues are important. The previous section pointed out that some of the additional output might be provided by reduction of exports. A cause of this could be that all the agricultural land is in use. On the other hand, one characteristic of Indian reservations is that available resources are underutilized. If so, then the assumption of input-output regional models, that unemployed resources exist for use at current input ratios, is defensible.

G. CONCLUSION

This chapter presents a fictional manufacturing plant and calculates the net present value and rate of return of the project from different viewpoints. The numbers selected describe a profitable project from all points of view. Private and social calculations differ because the project uses otherwise unemployed workers throughout its life, and uses otherwise unemployed land during its first five years. The most favorable point of view is that of the tribe, if the tribe does not consider the return of individual investors. As shown in Table MFG-7, a return of 45 percent is calculated. A more reasonable estimate is that given for the AIDFI in its social calculation, a return of 22 percent.

The final section of the chapter calculated impacts on an imaginary reservation using the 20 by 20 example of the third chapter. Substantial impacts are shown to be possible when a project uses inputs produced on a reservation and the production of those inputs is caused by the introduction of a new project.

CHAPTER V—A NATURAL RESOURCE EXAMPLE

A. INTRODUCTION

The previous two chapters analyze projects whose social benefits have differed from private benefits due to employment. For both cases, the benefit of additional income from full time jobs increases social returns. For the manufacturing case, additional rent for unoccupied land in an industrial park is also a social benefit. This chapter presents an example in which social considerations lead to additional costs rather than additional benefits. The example assumes a tribe invests in a mineral extraction activity. Although the mine shows a good rate of return when just the revenues and expenses of the mine are taken into consideration, when effects on displaced ranchers, on the environment, and on governmental expenses are considered, the project is no longer so attractive. No attempt is made to chart the impact of this project on a reservation through use of a social accounting matrix, as is done for the agricultural and manufacturing examples. Also, only two points of view are presented, the project alone and the project with social costs taken into account.

The following social costs are assumed to occur in this example. Two ranchers are forced to close because of land and water taken out of their control. Three environmental impacts occur: some recreation uses of the land near the mine are impaired; water is diverted which is not replaced in the same quantity or quality; and air quality is lowered. Finally, residence on the reservation of additional non-Indians and other requirements of the mine cause the costs of operating tribal government to rise.

B. SIMPLIFYING ASSUMPTIONS

Resource extraction is complicated, and economic analysis of the potential of a mineral deposit is also difficult. Because of this, the example of this chapter is simplified to focus upon the ways in which environmental and other costs can be brought into a discounted cash flow analysis. This section of the chapter briefly describes some of the complications which have been omitted. The reader should not assume that a real situation would be adequately handled if only the social aspects are dealt with. The purely business aspects must also be scrutinized. At least three important aspects of a natural resource extraction project are omitted or drastically simplified in what follows: (1) uncertainty, (2) taxation, and (3) control. There may be other important topics which are also left out.

Uncertainty is a big issue. Several types of uncertainty are important in considering the exploitation of a mineral deposit. First, the true size and quality of a deposit can be discovered only through geologic exploration, and expensive undertaking. Second, the future profitability of the mining activity depends upon the future price of the mineral. Prices for raw materials fluctuate widely. Over a twenty or fifty year life of a mine, these price fluctuations are difficult to predict and are not amenable to easy investigation. One cannot drill holes to find out what future prices will be. Economists may attempt to predict based upon some assumptions about future supply and demand. But their assumptions may be rather weakly supported.

There are methods of dealing with uncertainty. These methods involve calculating a large list of alternative outcomes, depending upon the value of key factors such as the price of output and the quality of the ore. Then the probability of each outcome is estimated, and a reasonable gamble is determined, based upon the goals and values of the institution which will take the risks. Although the analysis can get complicated, the complexity is needed because uncertainty is itself a complicated phenomenon.

Taxation is another complicated issue. There are both legal and economic aspects. If a project is going to be set up in a way that benefits both a tribe and a mining company or companies, there may be ways to structure the ownership of the mining operation in such a way that the total tax burden on all participants is minimized. For instance, it may be possible to use the taxing power of a tribal government to exclude the taxing power of a state government. The ability to do this may depend upon many particularities of a situation. Another example is depreciation. That Indian tribes are exempt from federal income taxation when they use their trust resources may seem to be an advantage. But one must consider the fact that corporations can deduct depreciation charges from their income. This is a potential revenue source which would interest a company but not a tribe.

The point in relation to taxation is that the financial structure of a mining agreement needs to be analyzed carefully from the taxation point of view. Because the legal environment is in flux at present, and because the fiscal effects of a project were handled in the previous two chapters, this example will ignore the issue of taxation. It will be assumed that the mine is tribally owned and therefore is exempt from federal income taxes and state taxes of all sorts. In addition, since the treatment of personal taxes has been demonstrated in the previous two examples, the fiscal effects of the income of workers in the mine will also be ignored.

A third issue is that of the sharing of control between the operator of a mine and the tribe. Commentators, tribal leaders, and congressmen have given much attention to the problems that arise when the owners of a mineral resource have little control over the mining activity once an agreement has been reached. Unanticipated problems occur in the employment of tribal members, the pollution of the environment, the enforcement or royalty provisions, and so forth. Consequently, at present there is a strong movement to improve the quality of mining agreements. This example is set up under the assumption that the tribe has a majority interest in the project, giving it control over these key factors.

In summary, the following assumptions are made in order to avoid dealing with the above problem areas. First, costs and returns are known with certainty. Second, there is no taxation. Third, control of development rests with the tribe.

C. DATA

Table NR-1 lays out the assumed data for this project. The table has two parts. Part A gives the costs and returns from the point of view of the project alone. It ends with a row which gives the net project cash flow. Part B gives the additional costs which should be included from a social point of view. It ends with a row giving the net private and social cost flow.

TABLE NR-1.—DATA FOR NATURAL RESOURCE EXAMPLE

[Part A: Project costs and benefits (in thousands)]

	Base year	Year—							Post project values
		1	2	3	4	5	6	7 to 30	
(1) Tribal initial capital	−500	−500							
(2) AIDFC contribution		−600	−400						
(3) Loans:									
a. Value received			1,600	1,000	750	1,750	1,750	0	
b. Repayment for Yr. 2				−107	−107	−107	−107	−107	
c. Repayment for Yr. 3					−68	−68	−68	−68	
d. Repayment for Yr. 4						−52	−52	−52	
e. Repayment for Yr. 5							−124	−124	
f. Repayment for Yr. 6								−127	
g. Subtotal—repayment costs				−107	−176	−228	−352	−479	
(4) Operating costs:									
a. Labor								−1,200	
b. Materials								−1,760	
c. Land rental	−40	−40	−40	−40	−40	−40	−40	−40	−800
(5) Operating revenue								+4,500	
(6) Salvage value									+1,800
(7) Net cash flow, private	−540	−1,140	−440	−147	−216	−268	−392	+1,021	+1,000

[Part B: Social costs (in thousands)]

	Base year	Year—							Post project values
		1	2	3	4	5	6	7 to 30	
(8) Ranchers' losses:									
a. Salary		−16	−16	−16	−16	−16	−16	−16	
b. Entrepreneurial value		−4	−4	−4	−4	−4	−4	−4	
c. Subtotal (a+b)		−20	−20	−20	−20	−20	−20	−20	−400
(9) Environment costs:									
a. Recreation								−100	−2,000
b. Water								−150	0
c. Air								−50	0
d. Subtotal (a+b+c)								−300	−2,000
(10) Government costs								−100	0
(11) Subtotal, social costs		−20	−20	−20	−20	−20	−20	−420	−2,400
(12) Net cash flow private and social	−520	−1,160	−460	−167	−236	−288	−412	+601	−1,400

The project is assumed to last for thirty years. It takes a base year plus six additional years to dig the required holes and set up any loan contributions. The only differences are that the amount of each principle is different and the number of years for repayment is different. The method used here to calculate the amount of annual payments was to use a Hewlett-Packard 38C financial calculator. The financial interest keys provide analysis of loan terms of this sort.

Now, what is the proper way to include the cost of these loans in the net cash flow of the project? It is assumed that the loans are available to the tribe only if they finance the development of the mine. Therefore, the loans are a cost only when they are repaid, not when the initial disbursement is received. The amount of the repayments in each year is the sum of the five different schedules. In year 3, the charge to net cash flow is $107,000. In year 4, the charge rises to $176,000 because an additional $68,000 is due on the $1,000,000 borrowed in the third year. These payments continue to rise to their final level of $479,000 in the seventh year. This payment level remains constant through the thirtieth year of the project.

It may seem odd to schedule the repayment plan in this manner, since there are no revenues until the seventh year. The assumption is that the equity owners, and in this case the tribe, will have to service the loans during years 3, 4, 5, and 6. Therefore, these payments represent additional capital contributions of the tribe as equity owner and would make the tribe the majority owner of the entity which undertakes the mine development.

Operating costs.—Operating costs are given in three categories: labor, material, and land rental. Only land rental is a cost before the mine comes into operation in the seventh year. At that time, the total wage cost is $1,200,000 per year. Materials—explosives, gasoline, and so forth—will total $1,760,000 per year. The land which is taken out of agricultural production paid a rent of $40,000 per year to the tribe. This rent is foregone forever when the mine is created. This is entered as a cost in each of the years. In the final column of the table is given the value of the rent forever in the years after the project is closed down. The figure of $800,000 represents the present value of $40,000 a year forever at an interest rate of 5 percent per year. (A valid alternative way to have handled this would be enter the value of the land, $800,000 as a cost contributed by the tribe in the first year. This would make the capital contribution of the tribe even greater.)

Salvage value.—In the thirty-first year of the project, the mine will run out of its mineral and have to be closed down. The salvage value of the plant and equipment recovered from the mine will be $1,800,000. This is entered in the last column of the table.

Private net cash flow.—The final row in part A of Table NR-1 is the private cash flow of the project. This row shows the cash flow situation as it would be recorded in the books of the project. A base year and six development years show a negative cash flow for each of them. Positive cash flows develop after the mining operation begins in the seventh year. As mentioned above, the loans from private sources are treated as costs when they are repaid. For this reason the cash flow in the development period does not include the full value of the loans, and therefore does not include the expenses which will be made in each of those years in constructing the project. This stream of expenditures will be used to calculate the discounted cash flow analysis from the point of view of the project alone. We now turn to social aspects which the tribal government needs to consider.

E. SOCIAL COSTS AND BENEFITS

Ranchers' losses.—The mine will remove sufficient land from production to force two ranchers out of business. The private losses of these tribal members must be taken into account. Since these ranchers will not be able to attain the same standard of living in another occupation, their lost income is a matter of concern. It is assumed that the ranchers and their workers will have a reduction of $16,000 a year in salaries and wages when they seek alternative employment. In addition, the farmers suffer a loss because they are forced out of an entrepreneurial role. This is estimated to be $2,000 a year for each, a total of $4,000 a year. These losses are perpetual ones; they begin in the first project year and continue past the life of the project. The total costs are $20,000 a year.

Environmental costs.—Once the mine is in operation, a number of environmental costs occur. There is a reduction in the value of recreation near the site of $100,000 a year. Water quality is lowered by the mine and this causes additional losses to the users of the water of $150,000 a year. Air pollution causes an additional loss of $50,000 a year. The total annual environmental costs are $300,000 a year from the seventh through the thirtieth year. In addition, recreational benefits of $100,000 a year forever are lost after the project closes down. Therefore, a value of $2,000,000 needs to be listed as a cost during the closing down process of the thirty-first year.

Government costs.—A mine creates demand for additional services from government. Since this mine is owned by the tribe, and since no taxes are collected from the mine, attention must be given to the additional expenditures by the tribal government which will result because of the mine. For example, the mine may cause non-Indians to move on to the reservation during the project. Keeping these new residents happy may require some services and some political activity. The mine may cause political pressure from neighboring communities, particularly if these are people concerned about environmental costs outside of the reservation which are not being paid for by the project. The political problems those would cause might be rather troublesome. Therefore, it is assumed that the tribal government's budget would have to rise by $100,000 a year to deal with all the potential service and political problems caused by the mine. These costs would occur only during the production phase.

Social cost cash flow.—The consequence of these social costs is that a substantial deduction needs to be made in each year of the project and in the close down in the thirty-first year. There are costs of $20,000 a year in the first six years due to the loss suffered by ranchers. In years seven through thirty, there is an additional $400,000 in cost for a total of $420,000 each year. In the final year of the project, the future lost income of the ranchers, $400,000, and the cost of the perpetually given-up recreation benefits of $2,000,000 must be charged to the project.

Private and social cash flow.—The last row of part B of Table NR-1 gives the sum of both the private and social cash flow entries in the table. "Private" means the project alone. "Social" includes social costs. In both cases, the point of view is that of the tribe and AIDFC combined. Compared to the private cash flow on the books of the project alone, there are additional costs which reduce the benefits of the project. The major change is that the benefits of $1,021,000 a year during the production period are reduced to $601,000 a year. In addition, the positive salvage value of the project becomes negative when the perpetual environmental costs are considered.

F. CASH FLOW ANALYSIS

We now turn to calculation of discounted present value and internal rate of return for this project. There are only two cases: (1) the project alone, the "private" analysis, and (2) the project and the social costs, the "social" analysis. The data for the private analysis is given in the last row of part A of Table NR-1. The data for the combined analysis is given in the last row of part B of Table NR-1. In keeping with the assumption of this chapter, a real rate of interest of 5 percent is used in the discounted cash flow analysis. Table NR-2 lays out the calculations and the results.

TABLE NR-2.—CALCULATION OF NET PRESENT VALUE NATURAL FOR THE NATURAL RESOURCE EXAMPLE

[In thousands]

i	Private cash flow (row 7, Table NR-1)		Social cash flow (row 12, Table NR-1)	
	CF_i	N_i	CF_i	N_i
	A. Data			
0	−540	1	−540	1
1	−1,140	1	−1,160	1
2	−440	1	−460	1
3	−147	1	−167	1
4	−216	1	−236	1
5	−268	1	−288	1
6	−392	1	−412	1
7	+1,021	24	+601	24
8	+1,000	1	−1,400	1

B. Results

1. Private Cash Flow
   Present Value at 5% : $7,668,000
   Internal Rate of Return : 17.6%

2. Social Cash Flow
   Present Value at 5% : $2,946,000
   Internal Rate of Return : 11.0%

The calculations were made on the Hewlett-Packard hand calculator used previously. The discounted cash flow analysis keys were used, because the cash flows vary in each period. The terminology of the Hewlett-Packard system uses the symbol CF_i to indicate the amount of the i-th cash flow, and n_i to indicate the number of periods for each cash flow. CF_0 indicates the cash flow in the first period. Negative signs indicate expenditures and positive signs indicate receipts. We have a total of eight cash flow amounts. One of them lasts for 24 periods, the twenty-four years of production from the seventh through the thirtieth year.

The internal rate of return for the project alone works out to 17.6 percent. The present value of the project at a 5 percent real discount is $7,668,000. This looks like a feasible and good project from the private point of view.

The internal rate of return for the project from a social point of view, however, is much less: 11.0 percent. The net present value at a five percent discount rate remains positive, at $2,946,000. But an analyst would want to check all the given data carefully with these numbers, for the project would just barely qualify as worthwhile.

G. DATA SOURCES

The example and analysis has been presented as if the data were easy to obtain. Data about the costs and returns of the project alone—the contents of Part A of Table NR-1—would come from a standard project analysis business line. Section B above discussed some of the complications which would arise in an actual example in compiling and analyzing the strictly business information.

The data on social impacts would involve some extra research. The impact on ranchers or other users of land displaced from their livelihood could best be estimated by interviews with the potentially affected people. If the number of them is not great, specific questions about their other training, their desire to change jobs, the amount that they have invested in their current activity, and so forth, could all be used to estimate the impact on their income.

Data on recreational benefits are not easy to generate. There is a literature on the topic of estimating the value to the public of recreation activity. One could search local libraries for studies on the recreational activities under construction to see what estimates have been made for other people. But some additional investigation specific to tribal members might be needed. An example of a question to ask would be, "If this recreational activity were not free, what is the most you would pay in order to be able to undertake it once a month?" In place of "recreational activity," one would fill in the relevant example, such as fishing, camping, hiking, or hunting. For fishing and hunting, the cost of purchasing the fish and meat is a minimum estimate of the value of the recreation, to which one needs to add the joy of undertaking the activity itself. Although it may be difficult to obtain firm numbers, it would be very valuable to attempt to estimate how many people would lose recreational benefits, and to guess at the value the average user places upon the resource.

The pollution of air and water also presents difficult but not insurmountable problems in estimating the value of the lost resource. Again, there is a growing literature that can be used to provide data for analogous situations. A decline in water quality, for instance, may raise the costs of using the water in ways that can be measured.

Some changes in governmental expenses may be easy to estimate and others more difficult. For an Indian tribe, some of the problems of jurisdiction over non-Indians make the standard estimates of costs a bit complex. One needs to know whether particular social services will be provided by the tribal government or a branch of state or county government. Litigation expenses may increase as a tribal government moves to defend its rights against state government.

For each of these types of social costs, a survey of possible examples and a listing of some sources for obtaining estimates of costs would be helpful. Such a survey would surely improve the value of this work to people carrying out project analysis. The objective of this chapter, however, has been to show how social factors can be included in the analysis without changing the general framework. If the social factors can be quantified and if dollar values can be assigned to them, then discounted cash flow can be used. *But,* some factors cannot be readily transferred into a monetary value. For instance, the mine might disturb sacred land. In these cases, one must say that the use of discounted cash flow analysis is not enough. On the other hand, decision-making without the financial results should also not be enough. One should want to have both the numbers and the non-numerical factors in order to reach final decision.

H. CONCLUSION

This chapter presents a simplified example of the analysis of a natural resource project. The example was simplified in a manner aimed at emphasizing ways to include social costs. The imaginary data were created so that the social costs have a dramatic impact on the rate of return of the project, lowering it from 14.6 percent to 7.2 percent. Unlike the agricultural example or the manufacturing example, no attempt is made to calculate the indirect impacts of the project through reconstruction of a social accounting matrix after the project comes into existence. Also unlike the previous two examples, social benefits from employing unemployed workers or land are not included.

CHAPTER VI—CONCLUSION

This work has three major topics relating to project analysis in Indian communities. Taken in reverse order of presentation, they are as follows. The examples in chapters 4, 5, and 6 show how private discounted cash flow analysis can be transformed into social discounted cash flow analysis. Chapter 3 deals with the big picture through examination of social accounting matrices. A community can use a social accounting matrix to examine how a project affects the whole economy of an area. Chapter 2 deals with institutional issues. It provides a checklist of issues which can too easily be omitted in an analysis which focuses only upon numbers. Although institutional issues were discussed first to stress their importance, the real focus of this entire work is the use of social cost-benefit analysis.

This concluding chapter has three parts. The first section draws together the examples in chapters 4, 5, and 6 by comparing the three projects in one graph. The second section briefly considers some shortcoming of this text. The third and final section gives a recommended series of steps to follow in conducting project evaluation.

A. PRESENT VALUE COMPARISONS

The analysis of projects eventually involves making choices among projects. This section compares the three examples in terms of their social returns. Tables C-1 and C-2 summarize the cash flows as reported in chapters, 4, 5, and 6. The tables use the comprehensive social cash flow for each project. Table C-2 has the same data as Table C-1, but in the second table the cash flows are grouped together for translation to a hand calculator. Table C-3 gives present value as a function of the interest rate used to discount future values to the present. It is derived from the data in Table C-2. Table C-4 is a graph that displays the data in Table C-3 in a different manner.

TABLE C-1.—ANNUAL SOCIAL CASH FLOW FOR THREE PROJECTS

Year	Agriculture	Manufacturing	Mining
Base year:			
1	–5,000,000	–1,000,000	–540,000
2	900,000	236,679	–1,160,000
3	900,000	236,679	–460,000
4	900,000	236,679	167,000
5	900,000	236,679	–236,000
6	900,000	236,679	–238,000
7	900,000	192,979	–412,000
8	900,000	192,979	601,000
9	900,000	192,979	601,000
10	900,000	192,979	601,000

TABLE C-1.—ANNUAL SOCIAL CASH FLOW FOR THREE PROJECTS—Continued

Year	Agriculture	Manufacturing	Mining
11	900,000	192,979	601,000
12	900,000	192,979	601,000
13	900,000	192,979	601,000
14	900,000	192,979	601,000
15	900,000	192,979	601,000
16	900,000	192,979	601,000
17	900,000	192,979	601,000
18	900,000	192,979	601,000
19	900,000	192,979	601,000
20	900,000	192,979	601,000
21	900,000	192,979	601,000
22	900,000	192,979	601,000
23	900,000	192,979	601,000
24	900,000	192,979	601,000
25	900,000	192,979	601,000
26	900,000	192,979	601,000
27	900,000	192,979	601,000
28	900,000	192,979	601,000
29	900,000	192,979	601,000
30	2,900,000	292,979	601,000
31	0	0	−1,400,000

TABLE C-2.—SUMMARY OF SOCIAL CASH FLOW VALUES FOR THREE PROJECTS

Cash flow number ($_i$)	Agriculture		Manufacturing		Mining	
	Cash flow (CF_i)	Number of periods (n_i)	Cash flow (CF_i)	Number of periods (n_i)	Cash flow (CF_i)	Number of periods (n_i)
0	−5,000,000	1	−1,000,000	1	−540	1
1	900,000	29	236,679	5	−1160	1
2	2,900,000	1	192,979	24	−460	1
3			292,979	1	−167	1
4					−236	1
5					238	1
6					−412	1
7					602	24
8					−1400	1

Sources: Agriculture, Table AG-7; Manufacturing, Table MFG-8; Mining, Table NR-2.

Terminology: i = index number of each cash flow; n_i = number of periods for the i-th cash flow; CF_i = amount of i-th cash flow.

TABLE C-3.—COMPARISON OF THREE PROJECTS' PRESENT VALUES AT VARIOUS DISCOUNT RATES

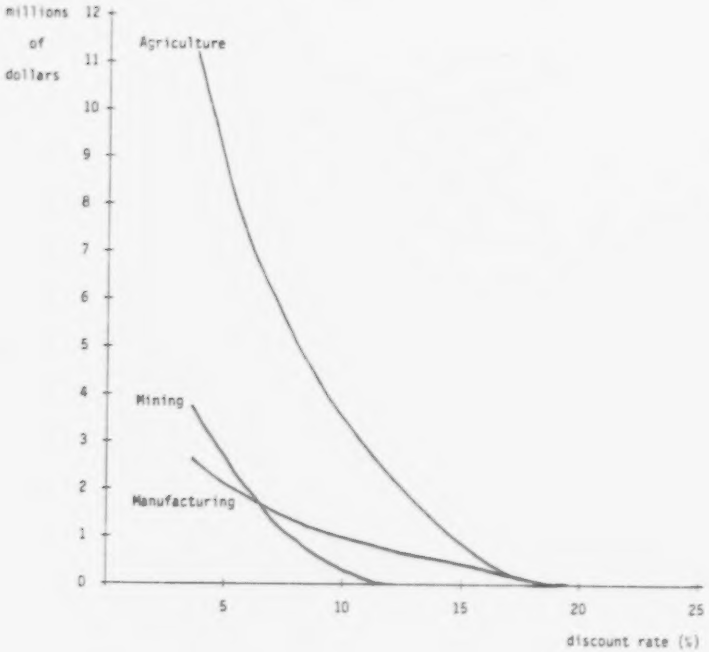
Discount rates	Present value		
	Agriculture	Manufacturing	Mining
4	11,179,000	2,562,000	3,834,000
5	9,298,000	2,179,000	2,946,000
6	7,737,000	1,858,000	2,211,000
7	6,431,000	1,587,000	1,599,000
8	5,331,000	1,357,000	1,089,000
9	4,397,000	1,160,000	661,000
10	3,599,000	991,000	302,000
11	2,912,000	844,000	200
12	2,316,000	715,000	−255,000
13	1,797,000	603,000	
14	1,342,000	503,000	
15	940,000	415,000	
16	583,000	336,000	

TABLE C-3.—COMPARISON OF THREE PROJECTS' PRESENT VALUES AT VARIOUS DISCOUNT RATES—Continued

Discount rates	Present value		
	Agriculture	Manufacturing	Mining
17	264,000	266,000	
18	−20,925	202,000	
19		144,000	
20		92,000	
21		44,000	
22		300	
23		−40,000	

Table C-4

Graphical Comparison of Three Projects



Examination of Tables C–3 and C–4 indicates that the manufacturing project is best (for its size), the agricultural project is second, and the natural resource project ranks third. There are some complications in arriving at a definitive judgment, which will be dealt with after discussing Tables C–1 through C–4.

Table C–1 gives the cash flow in constant prices for each of the thirty years of the projects (the natural resource project has a thirty-first year). An inconsistency exists in this data because the agricultural and industrial projects were evaluated using an interest rate of 9.26 percent to calculate the amortization of loans, while the loans available to the natural resource project charged an interest rate of 5 percent. One must distinguish between the interest rate used to discount future values and to compare different projects, and the market rate of interest which determines the interest rate paid on loans. In this case, it appears that the agricultural and industrial projects are participating in a market that is different from that of the natural resource example. This inconsistency was created by the author's desire to vary the interest rate in examples. Let us assume a special subsidy is available only to the natural resource project. Then we can carry on the comparison of the projects at different discount rates.

With the financial calculators which are now available, it is easy to make a table which shows the exact relationship between the discount rate used and the present value of the project for a set of cash flow values. One enters the cash flow values into the memory of the hand calculator as explained in the calculator's manual. One then solves for the present value of the cash flows for different values of the discount or interest rate. Personal or micro computers also have software programs which can be used for such analysis. An example should clarify this approach.

Take the industrial project, which is the second column in Table C–1. There is an initial capital cost of one million dollars, which is a negative cash flow in the base period, called period 0. There follows five years of social cash flow of $236,679 per year, twenty-four years at $192,979, and a final or thirtieth year of $292,979. The Hewlett-Packard financial calculator manual defines a system of letters to identify each of these. The following are the letters the HP–38C and other Hewlett Packard financial calculators use:

i = index number of each cash flow. For example, the initial cash flow is $i=0$. The cash flow in the first through the fifth year corresponds to $i=1$. In order to save room in the memory of the calculator, Hewlett Packard designed its program such that consecutive cash flows of the same value could be treated as a unit. The industrial project has four distinct cash flow values. They are read into the calculator as values of i from 0 to 3.

CF_i = The i-th cash flow, where it has just been defined. For this example, we have the following:

$CF_0 = -1{,}000{,}000$
$CF_1 = 236{,}679$
$CF_2 = 192{,}979$
$CF_3 = 292{,}979$

n_i = The number of periods during which the i-th cash flow occurs. The value of n_0 is 1, since base period is always one year long. In our case, the value of n_i is 5, since the i-th cash flow occurs five times.

Following the directions of the calculator, one enters these values into the various storage positions. Then, one can calculate the present value for these cash flows using a number of different interest rates. Each interest rate is stored in the "i" position and then the "NPV" key sets the calculator to work computing the net present value.

In this case, the exercise begins with a value of 4 percent. At an interest rate of 4 percent, the present value of the manufacturing project's cash flow in $2,562,000 (rounded to the nearest thousand dollars). At an interest rate of 5 percent, the present value of the project is $2,179,000. At 6 percent, the present value falls to $1,858,000. One continues this process until the present value becomes negative. For the manufacturing project, the present value becomes negative for values of the interest rate above 23. The "internal rate of return" for a set of cash flows is that interest rate for which the present value is zero. In this case, the internal rate of return is 22.1, as was reported in Table MFG–8. (In the old days, before hand calculators, this method of successive calculation of net present value was the easiest way to find the internal rate of return for a complicated set of cash flows. Now calculators provide an internal rate of return function key and find the solution for us. Most of them also search for the zero present value by calculating and recalculating net present value for different interest rates.)

Table C–3 gives the present values of the three projects for interest rates of 4 percent and above. Table C–4 graphs the values. As is usually the case, the ranking of investments differs as the interest rate differs. Between the interest rates of 4 and 7 percent, the following ranking occurs:

First: Agriculture
Second: Mining
Third: Manufacturing

But at an interest rate of 8 percent, the ranking changes as mining and manufacturing change position:

First: Agriculture
Second: Manufacturing
Third: Mining

At an interest rate of 12 percent, the present value of the mining alternative becomes negative. The next switch occurs at 17 percent, where the manufacturing project has a higher present value than does the agricultural project. At 18 percent, the present value of the agricultural project becomes negative.

We must consider the effect of scale on the comparisons among these projects. The initial amount of capital spent for each of them is different. The mining and manufacturing projects can be compared easily because they both involve a one-time expenditure in the base period. The cost of the agricultural project is five times that of the manufacturing project. Many people might be interested in the return per dollar invested, rather than the total present value of the project. Suppose that one alternative were to build five manufacturing projects exactly like the one we have studied. How would those five, as a group, compare with the agricultural project? They would be better than the agricultural project at all interest rates. One would multiply the second column of Table C-3 by 5; in every case the result is a present value higher than that of the agricultural project. But in fact it may not be possible to have five manufacturing projects equal to that which was analyzed here. Scale of operation is important, and the best scale is often determined by market considerations. Nonetheless, one can say that the manufacturing project gives more present value per dollar of capital invested than does the agricultural project. This simple comparison is not available for the mining project, because its capital cost is spread out over several years. We would need to convert the capital cost into dollars of the base year at each of the discount rates used in order to examine the effect of scale.

Table C-3 and its graph in Table C-4 are useful but not complete in the process of choosing among a number of projects. One consideration is the total *capital budget* of a tribe or any institution considering investment. A useful criterion to use would be to maximize the total value of the returns from the full capital budget, with whichever combination of projects gives that highest total return. In considering the choice among a number of projects, maximizing the social return from them all is a useful goal. But other considerations must be taken into account; for instance, the relative riskiness of each project is important. There may be additional institutional considerations which affect the riskiness or which are valued themselves but are not quantifiable.

The chapter concludes with some remarks on the process of implementing the ideas on project selection that are offered here. The section begins with some criticism of the present text, and concludes with a listing of steps to take in implementation.

B. CRITICISM RELATING TO IMPLEMENTATION

The original goal of this work is to write a document that is immediately useful to those engaged in analyzing projects. As the writing proceeded, however, the text focused upon explanation of the principles behind such analysis rather than upon the presentation of each of the steps needed in application of the principles. As a partial attempt to fill this gap, this final section will address some of the shortcomings of this work as a cookbook for project analysis.

From the perspective of the reader desiring a cookbook, the materials in chapters 2 through 6 can be criticized in at least three dimensions: (1) The details of the steps taken in applying the formulas are not spelled out in sufficient detail; (2) insufficient attention is given to problems of finding data to plug into the formulas; and (3) the examples are oversimplified, and no guidance is given to help analysts simplify a real example. The remainder of this section will deal with each of these problems.

The need for detailed instructions

A "cookbook" is a document which leaves nothing out in describing what to do. It contains recipes which tell exactly how much of each ingredient the cook needs. If one is going to make an apple pie, one needs 5 apples, one pie crust, etc. All but the most experienced cooks would be baffled by a pie recipe calling for the cook to "combine flour, shortening, water, apples, sugar, and spices and bake." More detail is needed. By analogy, a cookbook on project selection criteria would lay out exact and detailed specifications for the analyst to follow. To a certain extent, this text is vague in that manner, particularly in the instructions for the use of a social accounting matrix. Too many key steps are omitted, risking the results a cook would get if he followed the general instructions given above.

But another problem can occur, even if one writes in sufficient detail to meet the cookbook criterion. Suppose the ingredients are not available? Some recipes call for eggs; suppose eggs are not available, or the cook does not know where to look in the store? The ingredients for project selection are data. A good cookbook text might give very detailed instructions about what to do with the data, but not give any about how to obtain it. (Most books on capital budgeting fail to explain the source of data for use in the complicated formulas which are recommended.)

Sources of data

How does one go about assembling information on institutional factors, on a social accounting matrix, or for discounted cash flow analysis? Although this is a big question which cannot be adquately answered here, some remarks are needed.

Data on institutional issues might best be gathered through personal interviews on the reservation with key people. Reports by anthropologists or other social scientists may be useful but should not be relied upon without double-checking with people in the community.

Data for social accounting matrices would come from publications of the Bureau of the Census for counties, from income and expenditure sheets of governments and local businesses, and from personal interviews. Most efforts to construct a SAM would require information from a survey of households on the reservation in order to determine consumption patterns.

Data for projects themselves would come from interviews with people knowledgeable about the costs of equipment and supplies, markets, and means of production of the goods involved. It is difficult to list all the possible sources of information about the potential costs and revenues of projects. Of course, good information is required for this in order for an analysis to be worth much.

Complexity in actual cases

This work has simplified at every opportunity, in order to emphasize the social aspects of project selection. But one price of such simplification is that a person confronted with an actual case may not be able to simplify it along the lines described above. Big issues may loom important which were excluded. For instance, no discussion of risk is given above. But most projects involve some riskiness. Many choices are made in estimating the costs of production, among them is the choice of the proper size for a project. No discussion of selecting scale is given above.

Each of these three areas are legitimate criticisms of the present work from the point of view of implementation. The following final section suggests an organization of work for application of the ideas presented in chapters 2 through 6.

C. SUGGESTIONS FOR IMPLEMENTATION

A system of priorities needs to be given to the many ideas presented in the preceeding chapters. The following is a suggested set of steps to be undertaken in implementing the project selection criteria set out here. There would be two phases to complete. The first phase would examine a project from the social point of view, and would be focused only upon one project. The second phase would involve examination of the impacts of each project on the whole reservation economy. This phase also would involve selecting among projects if more than one is under consideration.

Phase 1: Social discounted cash flow analysis

Step 1: Conduct a Private Discounted Cash Flow Analysis

This is a big step which is not fully described in this work because it is well explained in other textbooks on capital budgeting. All of the hard work required to estimate revenues and costs for a business development project needs to be assembled before the work can proceed to social cost-benefit analysis.

Task 1a: Collect all cost and revenue data for the project

Task 1b: Calculate the present value and internal rate of return for the project using market prices; i.e., conduct the private discounted cash flow analysis.

Step 2: Identify Potential Shadow Price Changes

Once the project has been described using market prices to describe both costs and benefits, the next task is to identify areas in which the market prices may not accurately represent social values. In these areas, the market prices will be changed to shadow prices representing social values. For instance, the wage costs of previously unemployed workers will be assigned a shadow wage representing the costs to the worker of accepting employment. (This shadow wage will probably be lower than the market wage.) Another example occurs if there are some pollution costs which are given a zero market price in the private analysis; these would be given a positive price in a social cost-benefit calculation.

Step 3: Go Through the Checklist of Institutional Issues

The conclusion to chapter 2 presents a checklist of issues which may be relevant for assessing the institutional considerations. This list should be used to search for possible institutional complications which were left out of the private discounted cash flow analysis.

Step 4: Collect Data for Calculation of Shadow Prices

Using the decisions of step 2, additional information will be needed to assign a proper shadow price to costs and revenues which need to be adjusted.

Task 4a: Identify types of information needed

Task 4b: Collect the data

Task 4c: Calculate the shadow prices.

Step 5: Collect Data on Institutional Issues

Using the decisions reached in Step 3, conduct interviews and generally investigate each of the potentially important institutional issues. Write a brief report stating the conclusions on each.

Step 6: Identify Changes in Tax and Transfer Payments

Since part of the social cost-benefit analysis consists of identifying the effects on the budget of the federal government, it will be necessary to identify the changes in the federal budget which will occur. This requires estimating changes in federal income taxes, federal social security taxes, and other taxes. In addition, if decreases in welfare payments and in any other transfers would be estimated.

Step 7: Calculate Social Discounted Cash Flow

Using the data gathered in earlier steps, calculation of social returns using the shadow prices is the next step. If the analysis is going to involve several governmental points of view, then the data of step 6 would be used to calculate each of these points of view.

The completion of Step 7 would conclude Phase 1 of application of the investment criteria. The conclusion would be a statement of the social returns, from Step 7, and an associated assessment of the institutional issues, from Step 5.

Phase 2: Analysis of economy-wide impacts

Each of the projects under consideration on a reservation would be analyzed using the steps indicated in Phase 1. Some of the steps could be used for several different projects. For instance, analysis of the employment effects of one project would assist in analysis of the effects of others. If sufficient planning resources exist, then all of phase 2 would be undertaken. Otherwise, only the first two steps would be completed.

Step 8: Determine Capital Budget Size

If several different projects are under consideration, which should be the usual situation, then the first step in selecting projects is to determine the resources available for investment in each of the years under consideration.

Step 9: Select a Best Combination of Projects

Once each of the project analyses have been completed, the process of choice among them can proceed. Projects should be compared to one another in terms of social costs and returns, risk, and institutional considerations. A chart such as that constructed in Tables C-3 and C-4 would be one tool to use in order to see the relationship between net present value and the discount rate for each of the projects. The projects with the highest net present values would be combined to give the best total use of the capital budget. But some of the institutional considerations might affect the final selection. Also, nothing has been said so far about the importance of the relative riskiness of different projects. Risky projects should be avoided unless they offer sufficient prospect for returns to offset their riskiness.

Step 10: Determine if a Social Accounting Matrix is Feasible

In order to apply the idea of a social accounting matrix, it is necessary first to assemble one. Although it may not be necessary for the matrix to be completely accurate in all dimensions, a few key types of information are needed. These are information on the consumption patterns of the residents of the reservation, information on the sources of supply for producers on the reservation, and income and expenditure information for all governmental institutions and a representative sample of private businesses on the reservation. Should it be necessary to conduct a survey to obtain one of these types of information, substantial expenditure of planning resources and time will be involved.

Step 11: Construct a social accounting matrix

If feasible, then all the data should be assembled into a matrix and the various discrepancies between different information be reconciled. This step has many separate tasks, which can be shortened to the following:

Task 11a; Determine the classification system to be used for the SAM

Task 11b: Assemble a first attempt at the SAM

Task 11c: Reconcile data inconsistencies and balance the SAM

Step 12: Estimate reservation-wide impacts of each project

With task 11 complete, and with the separate analyses of the potential projects, one can proceed to estimate changes in the reservation economy which would result from each of the projects.

Task 12a: Determine first-round effects of each project

Task 12b: Calculate indirect or induced effects of each project and partially rebalance the changed SAM

Task 12c: Examine the results to see if the estimated impacts are reasonable, given the nature of the reservation economy.

These tasks would be difficult for non-economists to complete, since Tasks 12b and 12c require familiarity with implementation of input-output techniques through matrix algebra.

Step 13: Re-evaluate choice of projects

With the results of analysis using a SAM, the selections made in Step 9 should be re-examined in light of the additional information about the induced or economy-wide impacts of each of the projects. Some projects with modest direct effects may have substantial indirect effects on an economy and therefore would be preferable.

GLOSSARY [1]

Amortization

The amortization of a loan is the process of repaying the loan, usually in equal installments over the period in which it is due. The repayment schedule of a home mortgage is an example of the amortization of a loan in equal installments. This method of amortization is used for loans in projects in this work.

Capital budgeting

Capital budgeting is the process of deciding how to spend an institution's capital budget; it could also be called investment planning, where investment includes construction of physical capital (buildings, equipment, land improvements) as well as investment in financial securities.

Capital structure

Capital structure consists of the banking and savings institutions which serve to channel savings and other funds available for investment to enterprises or households who wish to invest. Examples are savings and loan institutions, banks, and the stock market.

Cash flow

Private cash flow is the difference between revenues and expenditures for a period of time, usually a year. Expenditures include all costs of production, servicing of debt, and taxes. Depreciation allowances are not an expenditure and are included in cash flow. Social cash flow is the difference between revenues and expenditures when both are calculated using shadow prices. Since shadow prices are not equal to market prices in every case, social cash flow is not as tangible as is private cash flow.

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[1] This glossary defines the terms as used in this work. Through error or oversight, the definitions given here may vary from the manner in which the terms are used in other works.

Consumption

In a set of accounts for a region, consumption is the purchase of goods and services by households and governments. These institutions consume the goods during the year. For these institutions, purchases which are not consumption are classified as investment. Different authors and nations classify goods in different ways. In the United States, for instance, the purchase of most durable goods, such as cars, refrigerators, and furniture, are classified as consumption. Also, all government purchases in the United States are classified as consumption. In the social accounting matrix in this work, however, governments are given a capital account and can invest.

Discount rate

A discount rate is a rate of interest used to discount cash flow which occurs in some future year back to the present. For a formula showing the use of a discount rate, see the definition of present value.

Equity

Equity is the capital contribution by owners of a firm or project. It is distinguished from other forms of capital contribution, such as loans or bonds. Equity owners share the profits of the enterprise. An equity owner may be a single individual, as in a farm. The owners may be partners, or holders of common stock.

Exports

Exports from a region is the value of all goods and services which were produced in the region but were purchases by people outside of the region.

Factor income

Factor income is the income of land, labor, and capital. The factor income of land is rent, the factor income of labor is wages, and the factor income of capital is profit and interest.

Factor of production

A factor of production is one of three things: capital, labor, or land.

Final entry

In a social accounting martix, a final entry is a receipt by one category of account of an expenditure of a different category of account. In this work, there are four categories of accounts: production, institutions, capital, and rest of world.

Gross domestic product (GDP)

Gross domestic product is the value of goods and services produced within the boundaries of a country, without any attention paid to the nationality of the person producing the good or service. It is "gross" rather than "net" because depreciation is not subtracted from the income of capital.

Gross national product (GNP)

Gross national product is the value of all goods and services produced by the members of a nation without any attention paid to the nation of residence of the owners of the factors of productions which produce the goods. It is "gross" rather than "net" because depreciation is not subtracted from the income of capital.

Gross reservation product (GRP)

Gross reservation product is that value of all goods and services produced within the boundaries of reservation, with no attention paid to the ethnic identification of the persons producing the goods and services. GRP's definition for Indian reservations corresponds to that of GDP for nations.

Gross tribal product (GTP)

Gross tribal product is the value of all goods and services produced by members of a particular tribe, no matter where those tribal members live. GTP's definition corresponds to that of GNP for nations.

Imports

Imports for a region are all goods purchased by production accounts, institutions, or capital accounts from producers located outside of the region.

Input-output coefficient

In an input-output model of a region, an input-ouput coefficient gives the value of a specific input that is required per dollar of output. Each good produced by the region's economy will have a group of input-output coefficients that give the required inputs of other products of the region to produce the output. Input-output coefficients are calculated from an input-output table by dividing the intermediate purchases of each production account by the total value of the output of that product. (Note: this is the "interregional definition of a regional input-output coefficient, because only inputs from the region are used. All other inputs are classified as imports. In a "multiregional" definition, the input-output coefficient would be calculated based on all each type of input, whether produced in the region or not.)

Input-output table

An input-output table is usually defined as the intermediate transactions of production accounts. The table gives the values of goods and services as inputs in the production of other goods and services. (This is the "A" block of transactions in Chapter 4.) An input-output table can also be defined to include the purchases of services from factors of production in value added rows and the purchases of goods by final demand sectors with additional columns. This broader definition of an input-output table would include all of the purchases and expenditures by production accounts in a social accounting matrix.

Intermediate entry

In a social accounting matrix, an intermediate entry is a transaction between two different categories of accounts. Four categories of accounts are used in this work: production, institutions, capital, and rest-of-world.

Injection

An injection in an economy is either consumption, investment, or exports. These are called injections because they are direct purchases of goods and services which are used as the basis of multipliers determining the level of income of a region.

Internal rate of return

The internal rate of return for a series of cash flows is the discount rate for which the net present value of the cash flows is exactly zero. See net present value for the equation; the internal rate of return is the value of r in that equation which makes NPV equal to zero.

Investment

Investment is the purchase of capital goods for the purpose of producing goods and services. Firms invest by building factories and purchasing equipment for them. Households invest by building homes. Governments invest by building office buildings, roads, and purchasing equipment for use for more than one year.

Joint venture

A joint venture is an enterprise which is owned jointly by both members of the private sector and by a government. On Indian reservations, a joint venture is an enterprise jointly owned by a tribal government and an outside corporation.

Leakage

A leakage from an economy is one of three things: imports, savings, or taxes. They are called leakages because they represent income received but not spent on production by the person or institution receiving the income. They are contrasted to injections.

Market price

A market price is the price used when a purchaser and seller exchange a good or service. Rent, wages, profit are called market prices, as are all prices of goods and services.

Matrix

A matrix is a two dimensional table of numbers.

Multiplier

A multiplier gives the change in income which results from a given change in an injection. For instance, if exports increase by some amount, say \$100, and this causes income to rise by \$120, then the multiplier is \$120/100, or 1.2. The method of calculating a multiplier always depends upon the characteristics of the model being used to define "income" and "injection."

Monetary rate of interest

The monetary rate of interest is the rate of interest expressed in terms of money alone, as in most financial assets. The interest rates quoted in business sections of daily newspapers are monetary rates of interest unless the author specifically says otherwise. A monetary rate of interest is related to the real rate of interest and anticipated inflation rates. Two expressions are often used to define the relationship. First, the monetary rate of interest is the sum of the real rate of interest and the anticipated rate of inflation. Second, the monetary rate of interest is determined by multiplication as follows:

$$1+m=(1+r)(1+i)$$

where,

m = monetary rate of interest
r = real rate of interest
i = anticipated rate of inflation

The three types of rates are expressed as decimals. For instance, if the real rate of interest is 5 percent and the anticipated rate of inflation is 6 percent, than the monetary rate of interest is 11 percent using the first method, and it is 11.3 percent using the second method:

$$1.113=(1.05)(1.06)$$

The monetary rate of interest is also called the nominal rate of interest.

Net present value

The net present value of a project is the difference between the present discounted value of all benefits and the present discounted value of all costs (both operational costs and capital costs). It is computed from data on capital costs and cash flow for the life of a project. Its formula is as follows:

$$NPV = -C_0 + \frac{B_1 - C_1}{(1+r)^1} + \frac{B_2 - C_2}{(1+r)^2} + \ldots + \frac{B_T - C_T + FV}{(1+r)^T}$$

where

NPV = Net present value
B_T = Benefits or revenues in period t, where t runs from 1 to T
C_T = Costs in period t, where t runs from 1 to T
T = Number of periods or years in the project
FV = Final or Salvage value of the project

In this formula, the items in the numerators are the cash flows of the project. In the base period, the cash flow is $-C_0$. In the first period, the cash flow is $B_1 - C_1$, and so on.

Nominal rate of interest

The nominal rate of interest is the monetary rate of interest.

Present value

Present value refers to the value today of money, goods, or services which will be received sometime in the future. By definition, a dollar to be received T years from now is worth the following when discounted by a discount rate r:

$$PV = \frac{1}{(1+r)^T}$$

For example, if a dollar will be received five years from now and the interest rate is 5 percent, the value of that dollar today is as follows:

$$PV = \frac{1}{(1.05)^5} = \frac{1}{1.2762} = .7835$$

One dollar to be earned five years from now is discounted by .7835 in order to give the value of that dollar today. Another way to look at this is to say that one would need to invest .7835 cents today at five percent per year in order to have a dollar five years from now. A table of present values, a hand calculator, or a home microcomputer can be used to perform the arithmetic.

Real rate of interest

The real rate of interest is interest in constant prices. It is obtained from the monetary rate of interest and the rate of inflation using a mathematical formula. The formula is given in the definition of the monetary rate of interest.

Salvage value

The salvage value of an project is the scrap value of the equipment at the end of the project's life. If a project will exist beyond the end of the period used for analysis, then the salvage value will also include an estimate of the net present value of the project in the final year.

Shadow price

A shadow price is a price chosen to represent social costs or benefits associated with a good or service. A market price can be a social price if it captures all of the costs which are relevant. If the market fails to take all relevant factors into account, then a shadow price is used to correct the deficiency. Shadow prices are also called social accounting prices.

Value added

Value added is a characteristic of production activities in a social accounting matrix. It is the difference between the value of a product and the value of goods purchased to produce the product. Value added is the same as factor income, because the difference between the sales value of a product and the costs of other goods purchased is used to pay labor, land, and capital for their services in producing the good.

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TRIBAL TAXATION FOR ECONOMIC DEVELOPMENT

(By Reka Potgieter Hoff)

INTRODUCTION

Although taxation is a basic power of self-government, American Indian tribes have only recently begun to assert the power to levy taxes. Tribal tax systems presently consist principally of exportable taxes; that is, of taxes borne by persons not resident in Indian country.[1] Exportable taxes are business license fees, business activity taxes measured by gross receipts or gross income, personal property taxes on leases, general sales taxes, selected excise taxes, and severance taxes.[2] No tribe has enacted or yet considered enacting a personal net income tax on reservation Indians. At least one tribe has considered enacting a payroll tax on both Indians and non-Indians employed on the reservation.[3]

Most tribes have a low taxation potential (defined as the excess of actual consumption over the minimum essential consumption of the population). However, there is some indication that this state of affairs may soon change as real estate developers join natural resource companies to lease reservation and allotted lands for development. Presently there are a few Indians, holders of allotted lands, who receive substantial income from the long-term lease of allotted lands for mineral exploitation and/or development. In some instances the tribal governments receive substantial income from leasing tribal lands. To date, no tribe has attempted to tax lease income received by individual Indians. The tribes have used lease income received from the lease of tribal lands for governmental services and/or have distributed such income pro rata among the tribal members.

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[1] 18 U.S.C. § 1151 defines "Indian country" as "(a) all land within the limits of any Indian reservation under the jurisdiction of the United States government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation, (b) all dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a state, and (c) all Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same." See Note, *The Meaning and Implications of "Indian Country": State* v *Dana*, 31 Me. L. Rev. 171 (1979); F. Cohen, *Handbook of Federal Indian Law*, 29–46 (1982 ed.).

[2] Excise taxes can be distinguished from sales taxes in that sales taxes are generally levied at a flat percentage rate on most consumer goods and services, with exemptions only for "necessities" such as food and medicine. Excises are levied on particular items of consumption at *ad valorum* rates that differ among commodities, or on a per unit basis, e.g., as a certain amount per 100 cigarettes or proof gallon of alcoholic beverage. See S. Cnossen, *Excise Systems: A Global Study of the Selective Taxation of Goods and Services*, (1977). A severance tax is an excise on the severance, extraction, or production of a natural resource measured by the value or quantity of the resource severed, extracted or produced. See *Commonwealth Edison Co.* v *Montana* 453 U.S. 609 (1981); Mont. Code Ann. §§ 15-35, 101-111 (1981).

[3] Currently no tribe has a payroll tax in force. The Umatilla Tribe has proposed a 4 percent payroll tax. See Table 1, Appendix.

Recent tribal interest in exercising taxation authority has been sparked by two factors: a resurgence of nationalism and a desire to spur economic development in order to reduce tribal dependency upon federal assistance. The immediacy of the need to increase the level of tribal economic self-sufficiency has been underscored by the recent action of the Regan administration in reducing income transfer payments and governmental services to Indian people.[4]

Taxation for tribal economic development raises difficult legal jurisdictional considerations which are in addition to the problems that ordinarily would be faced by any government that sought to use the tax system as a lever to move its economy from a present underdeveloped state to a higher level of development. These considerations arise out of the fact that the American Indian tribes are a unique entity in the federal structure: not a foreign country, not a state or municipality, but nonetheless an independent entity with inherent powers of self-government, subject to modification by Congress.[5]

The purpose of this paper is to consider the suitability of different tax structures for American Indian tribes. Section 1 is concerned with the issue of tribal sovereignty as it relates to the scope of tribal taxation authority. Section 2 considers alternative tax systems in the context of taxation for economic development. Section 3 takes up the difficult question of tax coordination. It considers the different mechanisms available for fitting tribal tax systems into the present federal-state structure so that multiple taxation of the same transaction is avoided. Section 4 is a conclusion.

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[4] For example, Reagan budget cuts for the Navajo Tribe alone were $152 million in FY 1982. Approximately 10,000 Navajo jobs were lost due to a cut in CETA funds of $30 million; 11,000 Navajo jobs were lost due to termination of the publicly funded housing program. *The Navajo Nation: Overall Economic Development Program*, 10 (1982).

[5] There is no statutory definition of "Indian tribe." The only explicit constitutional reference to Indians merely authorizes Congress "to regulate commerce with foreign nations, and among the several States, and with the Indian tribes." Art. I, § 8, cl. 17. Generally, a group is recognized as a tribe if Congress or the Executive has created a reservation for the group by treaty, statute, executive order, administrative action. See F. Cohen, *Handbook of Federal Indian Law*, 3-19 (1982 ed.); J. Lobsenz, *"Dependent Indian Communities": A Search for a Twentieth Century Definition*, 24 *Az. L. Rev.* 1 (1982).

CHAPTER I—TRIBAL SOVEREIGNTY AS IT RELATES TO THE SCOPE OF TRIBAL TAXATION JURISDICTION

A. INTRODUCTION

On January 13, 1983, President Reagan announced the establishment of a Commission on Indian Reservation Economies to "advise the President on what actions should be taken to develop a stronger private sector on Federally recognized Indian reservations, lessen -tribal dependence on Federal monies and programs and reduce the Federal presence in Indian affairs."

This commission is the latest in a long history of Federally sponsored commissions, studies, reports, and investigations of the problem of Indian poverty and dependence.[6] While Congress has plenary power over Indian affairs,[7] it has never enacted a plausible legislative framework to bring order to the chaotic relationship that exists between the Indian tribes and the state governments within whose boundaries the tribes are physically located. As long as the tribes did not attempt to exercise tax authority over non-Indians, the area of conflict between state and tribal governments was confined to disputes over civil and criminal jurisdiction.[8] The area of conflict did not significantly move to the tax arena until 1973 when both the Confederated Tribes of the Colville Indians and the State of Washington imposed an excise tax upon the reservation sale of cigarettes to Indians and non-Indians.[9]

Delineation of the scope of tribal taxation jurisdiction raises two separate issues: (1) the source of tribal taxation jurisdiction, and (2) limitations on tribal taxation jurisdiction.

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[6] For a history of federal Indian policy following the Civil War see L. Carlson, *Indians, Bureaucrats, and Land: The Dawes Act and the Decline of Indian Farming*, (1981); S. Tyler, *A History of Indian Policy*. (1973).

[7] Congressional authority to regulate Indian affairs and to determine tribal legal status is based on the Indian Commerce Clause of the Constitution, which grants Congress power "(t)o regulate Commerce . . . with the Indian Tribes." Art. I, § 8, cl. 3. The Treaty Clause of the Constitution, art. II, § 2, cl. 2, granting exclusive authority to the federal government to enter into treaties is also a source of federal authority. The practice of treaty making was discontinued by Congress in 1871, 25 U.S.C. § 71.

[8] Disputes over the extent of state civil and criminal jurisdiction within Indian country have decreased since 1953 when Congress enacted Public Law 83-280, 18 U.S.C. § 1162, 25 U.S.C. §§ 1321-1326, 28 U.S.C. § 1360 delegating to six states civil and criminal jurisdiction over tribal governments within state borders. In 1968 Public Law 280 was amended to make the assumption of state jurisdiction over tribal government subject to Indian consent in a special election, 25 U.S.C. § 1326. State assumption of civil jurisdiction does not include civil jurisdiction to enforce state sales taxes imposed upon the property and activities of Indians resident within Indian country. *Bryan* v. *Itasca County, Minnesota*, 426 U.S. 373 (1976). See C. Goldberg, *Public Law 280: The Limits of State Jurisdiction over Reservation Indians*, 22 *UCLA L. Rev*. 535 (1975). Both the civil and criminal provisions of Public Law 280 provide explicitly that the law does not give authority to the states to assume either civil or criminal tax jurisdiction over on-reservation activities of Indians resident in Indian country. 28 U.S.C. § 1360(6), 18 U.S..C § 1162(6).

[9] *Confederated Tribes of Colville* v. *Washington*, 445 F. Supp. 1339 (D.C. Cir. 1978), aff'd, 447 U.S. 134 (1980).

B. THE SOURCE OF TRIBAL TAXATION JURISDICTION

(1) *Taxation Jurisdiction before the Indian Reorganization Act of 1934*

The special legal status of American Indians antedates ratification of the Constitution.[10] The colonists treated the Indian tribes as independent nations, entering into formal treaties and agreements with them. In 1775 the Continental Congress asserted exclusive treaty-making authority with the Indians in the hope of reducing Indian raids on white settlers in retaliation for white encroachments on Indian country.[11] The Articles of Confederation gave "(t)he United States in Congress—the whole and exclusive right and power of—regulating the trade and managing all affairs with the Indians—provided that the legislative right of any State within its own limits be not infringed or violated."[12] The Constitution granted the President the power "by and with the Advice and Consent of the Senate to make treaties."[13] No distinction was made between treaties with Indian nations and with foreign powers. None of the treaties with the Indian tribes dealt specifically with tribal taxation authority.[14] The treaty making process was ended in 1871 as the first step toward the general allotment of Indian lands and the destruction of tribal authority.[15] This policy of forced assimilation was implemented in 1887 by enactment of the General Allotment Act or Dawes Act.[16] The purpose of the act was to break up the reservations by dividing the communally held lands into individualized parcels. Each tribal member was to be allotted a parcel large enough to farm with the surplus remaining to be sold to white settlers, the proceeds going to finance the "civilizational" process by which the Indians were to be assimiliated into the white community.[17] Under the Act native-born Indians receiving allotments and Indians living off the reservation were granted U.S. citizenship.[18] The Congress did not assert full jurisdiction under the Dawes Act over all reservation activities. There was left some area for the exercise of tribal self-government. In the tax area, a few tribes imposed license fees on non-Indians carrying on economic activity within Indian country. For example, the Creek Nations, one of the Five Civilized Tribes, imposed a license or privilege tax on non-Indian traders.[19] The Chickasaw Nation imposed a permit fee on non-Indians leasing Indian land or doing business on the reservation and a property tax on cattle owned by non-Indians and grazed on Indian land.[20] Both of these taxes were held to be a constitutional exercise of inherent tribal governmental authority, not related to the power of the tribe to remove non-Indians present without permission. Judge Sanborn of the Eight Circuit Court of Appeals defined the origin and scope of tribal taxing power in *Buster* v. *Wright:*

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[10] For two different perceptions of the transfer of aboriginal Indian title to the federal government compare F. Cohen, *Original Indian Title*, 32 *Minn. L. Rev.* 28 (1947) with F. Jennings, *The Invasion of America: Indians, Colonialism, and the Cost of Conquest*. See also, V. Deloria, Jr. & C. Lytle, *American Indians, American Justice*, (1983).

[11] Cohen, supra note. 13 at 30.

[12] Articles of Confederation, Art. IX.

[13] U.S. Constitution, Art. II, § 2.

[14] Cohen, *Handbook of Federal Indian Law*, 142 (1942).

[15] F. Carlson, supra note 9, ch 1. See Act of March 3, 1871, Ch. 120, § 1, 25 U.S.C. § 71.

[16] Ch. 119, § 1, 24 Stat. 288, as amended, 25 U.S.C. § 331. General Allotment Act of 1887, Ch. 119 § 1, 24 Stat. 288 (codified as amended, 25 U.S.C. § 331).

[17] General Allotment Act of 1887, Ch. 229 § 6, 24 Stat. 390.

[18] The Dawes Act did not completely resolve the citizenship problem. In 1924 Congress declared all Indians not yet designated as citizens to be U.S. citizens. Act of June 2, 1924, ch. 233, 43 Stat. 253, (codified at 25 U.S.C. § 140 (a)(2)).

[19] *Buster* v. *Wright*, 135 Fed. 947 (8th Cir. 1905), appeal dismissed, 203 U.S. 599; *Crabtree* v. *Madden*, 54 Fed. 426 (8th Cir. 1893).

> The authority of the Creek Nation to prescribe the terms upon which noncitizens may transact business within its borders did not have its origin in act of Congress, treaty or agreement of the United States. It was a natural right of that people, indispensable to its autonomy as a distinct tribe or nation, and it must remain an attribute of its government until by the agreement of the nation itself or by the superior power of the republic it is taken from it.

The Dawes Act did not affect the taxing authority of those tribes that remained in existence during the allotment period.[21]

(2) Taxation Authority of Tribes Organized Under the Indian Reorganization Act of 1934

The allotment program was a failure.[22] The Indians were not turned into prototypical American farmers by the allotment of Indian lands. The Indian Reorganization Act of 1934 (IRA)[23] brought the allotment program to an end for all tribes and recognized the separate legal status of tribal governments. The IRA is based on the assumption, contrary to the Allotment Act, that the tribes will be in existence for an indefinite period and that tribal self-government should be strengthened.[24] Consistent with this assumption, the IRA affirmed the power of Indian tribes to levy taxes upon Indian members and upon non-Indians and non-tribal members doing business within Indian country.[25] Felix Cohen quotes the following clause as a "typical" constitutional statement of tribal taxing power for an IRA tribe:

> "To levy taxes upon members of the tribe and to require the performance of reservation labor in lieu thereof, and to levy taxes or license fees, subject to review by the Secretary of the Interior, upon non-members doing business within the reservation."[26]

To date 227 tribes have ratified the IRA and have received Secretarial approval for their constitutions.[27] The authority of a tribe organized under the IRA to tax non-members rests not on the power to exclude non-members who fail to pay the tax but on the sovereign authority of the tribe to attach conditions on the right of non-members to conduct business on the reservation, including the condition that they pay a tax.[28]

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[20] *Morris* v. *Hitchcock*, 194 U.S. 384 (1903).

[21] *Buster* v. *Wright*, 135 Fed. 947, 951 (8th Cir. 1905).

[22] *Institute for Government Research, The Problem of Indian Administration*, (L. Meriam ed. 1928).

[23] 25 U.S.C. Subchapter V.

[24] See Comment, *Tribal Self-Government and the Indian Reorganization Act of 1934*, 70 *Mich. L. Rev.* 955 (1972).

[25] 25 U.S.C. § 476; *Merrion* v. *Jicarilla Apache Tribe*, 455 U.S. 130 (1981).

[26] F. Cohen, *Handbook of Federal Indian Law*, 143 (1942 ed.).

[27] Indian Reorganization Act, Act June 18, 1934, c. 576, 48 Stat. 984.

Recently, the Supreme Court in *Merrion* v. *Jicarilla Apache Tribe* 455 U.S. 130 (1981) upheld the authority of the Jicarilla Tribe, organized under the IRA, to impose an oil and gas severance tax upon oil and gas production on tribal lands by non-Indian lessees. The tribal tax was challenged on four grounds: (1) Tribal taxing authority is based on the power to exclude non-Indians from tribal lands. Since the tribe did not initially condition the leases upon payment of a severance tax, the tribe has no authority to impose the tax at a later time. (2) Congress pre-empted the Tribe's power to impose a severance tax when it enacted the Act of 1938, 25 U.S.C. §§ 396(a)–396(g) regulating the leasing and development of oil and gas reserves on Indian land and when it enacted the Act of 1927, 25 U.S.C. §§ 398(a)–398(e) permitting state taxation of lessees on Executive order reservations. (3) Tribal taxation of oil and gas conflicts with national energy policies and therefore is pre-empted by federal law. (4) The tribal severance tax discriminates against interstate commerce in contravention of the Interstate Commerce Clause, U.S. Const., art I, § 8, cl. 3. Justice Marshall, for the court, rejected the contention that tribal taxing authority is based exclusively or even primarily on the power to exclude, stating that such authority "derives from the tribe's general authority, as sovereign, to control economic activity within its jurisdiction, and to defray the cost of providing governmental services by requiring contributions from persons or enterprises engaged in economic activities within that jurisdiction." Justice Marshall characterized the royalty payments as a division of profits between the tribe and the non-Indian lessees, operating as co-partners in a joint venture. He characterized the severance tax as a "contribution to the general cost of providing government services." [29]

The court dismissed the second ground of attack based on federal and state preemption of the Tribe's taxing authority, ". . . the mere existence of state authority to tax (royalties from mineral production on all Indian lands) does not deprive the Indian tribe of its power to tax."[30]

The court rejected the contention that national energy policies restricted Indian jurisdiction to tax mining activities on Indian land on the ground that Congress had included such taxes within the definition of "costs that may be recovered under federal energy pricing regulations."[31]

With respect to the fourth ground of attack based upon the commerce clause, without conceding that the commerce clause imposes restrictions on tribal tax authority, the court treated the fact of Secretarial approval of the tribal tax as foreclosing judicial inquiry into whether the tax in fact disrupted or burdened interstate commerce.[32]

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[28] *Iron Crow* v. *Oglala Sioux Tribe of Pine Ridge Reservation*, 231 F. 2d 89 (8th Cir. 1956); *Barta* v. *Oglala Sioux Tribe of Pine Ridge Reservation*, 259 F. 2d 553 (8th Cir. 1958).

[29] 455 U.S. 130, 137.

[30] 455 U.S. 130, 150–51.

[31] 455 U.S. 130, 151–52.

[32] 455 U.S. 130, 155–56.

In summary, Indian tribes organized under the IRA have authority to tax reservation Indians, with or without Secretarial approval; they have authority to tax non-Indians engaged in economic activities on the reservation, subject to Secretarial approval.

(3) Taxation Authority of Tribes Not Organized Under the Indian Reorganization Act of 1934

Merrion v. *Jicarilla Apache Tribe* left open the question of the legal status of tribal tax ordinances of tribes that have not ratified the IRA. The legal status of non-IRA tribal tax ordinances not submitted to the Secretary for approval is currently in litigation in the Tenth Circuit.[33] The Navajo Nation is not organized under the IRA.[34] In 1978 the Navajos enacted an annual tax of 1–10 percent of the value of lease interests on the reservation and an annual tax of 4–8 percent of the gross receipts, less specified deductions, of business activities on the reservation. The taxes apply alike to Indians and non-Indians.[35] Neither of the resolutions adopting these taxes requires Secretarial approval to make the taxes effective. To date, the tax ordinances have not been enforced and no taxes have been paid. These same properties and mining operations on the Navajo reservation are also subject to Utah state property and business activity taxes.[36] The Navajo taxes have been challenged by the Southland Royalty Company and by other non-Indian lessees of reservation oil and gas properties. The trial court denied the defendant tribe's motion to dismiss, holding that the tribal taxes were invalid without Secretarial approval. The trial court found the requirement of approval to be implicit in the extensive federal regulation of tribal mineral leases, 25 U.S.C. 396, and in the "historical relationship between the Interior Department and the Navajo Tribal Council."[37]

The legal status of tribal tax ordinances enacted by tribes that are not organized under the IRA is a difficult one. The issue is whether the Navajo tribe and other tribes, without Secretary-approved governments established under the Indian Reorganization Act, retain the power to tax reservation oil and gas operations under the Indian Mineral Leasing Act of 1938 [38] and to enact general tax ordinances free of Secretarial approval. Although organization under the Act is optional, certainly if non-IRA tribes have more autonomy than IRA tribes. there is no incentive for tribes to comply with the Act.

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[33] *Southland Royalty Co.* v. *The Navajo Tribe of Indians*, No. C79–0140 (D. Utah June 5, 1980), appeal docketed, No. 80–2035 (10th Cir. 1982).

[34] The Navajo Tribe has never ratified a constitution. In 1934, by popular vote, the Tribe rejected application of the Indian Reorganization Act under 25 U.S.C. 478. In 1950, 25 U.S.C. 636 was added to the Indian Reorganization Act specifically inviting the Navajo and Hopi Tribes to organize under the IRA. *U.S. Code Congressional Service* 2013–20 (1950). The Tribe declined to take any action.

[35] CAP–36–78; CJA–13–78. The Business Activity Tax exempts "commercial establishments that are primarily engaged in selling non-Navajo goods at retail within the Navajo reservation and any "traditional farming or livestock activities within the Navajo Nation."

[36] Utah Code Ann. §§ 59–5 (67), 59–13(3) (1984); Utah Const. art. XIII § 2.

[37] *Southland Royalty Co.* v. *The Navajo Tribe of Indians*, No. C79–0140, slip op. at 15–16 (D. Utah June 5, 1980) appeal docketed, No. 80–2035 (10 Cir. 1982). On August 17, 1980, the trial court, in response to appellants' subsequent motion for summary judgment, issued an amended judgment that the Navajo taxes were "unlawful, void and of no effect, and the said taxes shall have no force or effect unless and until they receive the lawful approval of the Secretary of the Interior of the United States." Record, Vol. 4, at 979–80.

[38] 25 U.S.C. § 396 (a)–(g).

> "Although Congress never intended to require a tribal constitution, Congress certainly did intend to encourage the Navajos to adopt one. However, there is no such encouragement if on the one hand tribes adopting a constitution must have the constitution approved by the Secretary, but on the other hand, tribes without a constitution may govern solely by tribal resolution without need for Secretarial approval. In fact, this state of affairs would encourage tribes *not* to adopt a tribal constitution, because to do so would be to place limits on tribal self-government that would not otherwise exist." [39]

The Indian Reorganization Act, by its terms, is not applicable to any reservation where a majority of the Indians vote against it.[40] The Commissioner of Indian Affairs has taken the position in *Southland Royalty* that he has no authority to pass on the Navajo tax ordinances because it is a non-IRA tribe.[41] Southland Royalty argued that Secretarial approval at least of the oil and gas severance tax is required, despite the absence of a tribal constitution, because of federal preemption of regulatory authority over reservation oil and gas production.[42]

Counsel for the Navajo Tribe pointed out that there exists no federal statute explicitly requiring Secretary review and approval of tribal ordinances. Rather, the only source of such requirement is the tribal constitutions of IRA tribes.[43]

A denial of Secretarial approval on the ground that the tax is imposed in an "unprincipal" manner or is "inconsistent with national policies" must be based on the written record. 25 CFR § 228.7(b)(5). Application of the proposed regulations is limited to tribal ordinances "where Secretarial review is expressly required by federal law, the constitution of the tribe, the ordinance itself, or other tribal law," 25 CFR § 228.19b.

In conclusion, under existing law non-IRA tribes have authority to tax reservation Indians and non-Indians engaged in economic activities on the reservation without Secretarial approval. The taxation jurisdiction of a non-IRA tribe is derived from its status as a "domestic, dependent nation," and not from federal law.[44]

C. LIMITATIONS ON TRIBAL TAX JURISDICTION

The source of tribal tax jurisdiction is the legal status of tribes as separate nation states within the United States. It derives not from Congress or treaty but from original Indian title by occupancy and remains an attribute of the exercise of tribal governmental authority until taken away by Congress. The question is what, if any, limitations are there on the exercise of Indian tax jurisdiction. The commerce clause and the due process clause restrict the exercise of state taxation authority. Do these restrictions apply also to the exercise of tribal taxation authority?

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[39] *Southland Royalty Co.* v. *The Navajo Tribe of Indians*, slip op. at 14 (D. Utah June 5, 1980).

[40] 25 U.S.C. §§ 476, 447.

[41] Southland Royalty Co. v. *The Navajo Tribe of Indians*, slip op. at 13 (D. Utah June 5, 1980).

[42] 25 U.S.C. § 396 (a)-(g); *Southland Royalty Co.* v. *The Navajo Tribe of Indians*, slip op. at 13-14.

[43] Brief for Appellees at 54, *Southland Royalty Co.* v. *The Navajo Tribe of Indians*, (D. Utah June 5, 1980).

[44] *Buster* v. *Wright*, 135 Fed. 947 (8th Cir. 1905), appeal dismissed, 203 U.S. 599.

Two possible restrictions on the exercise of tribal taxation authority are considered here: (1) Constitutional restrictions on tribal tax exportation;[45] and (2) application of the Indian Bill of Rights to tribal tax laws.

1. Constitutional Restrictions

The commerce clause, U.S. Const., art. 1, § 8, cl. 3, and the due process and equal protection clause, U.S. Const. Amend XIV, § 1, limit the exercise of state tax authority; they do not limit the exercise of tribal tax authority because the provisions of the federal constitution do not apply to tribal actions.[46] As applied to the states, the commerce clause invalidates a state tax if the tax conflicts with the power of Congress to regulate interstate commerce. Such conflict, or burden on interstate commerce, has been found in cases where a state imposed a license, franchise, or privilege tax on a foreign corporation doing an exclusively interstate business within the state,[47] or on gross receipts from interstate commerce.[48] State severance taxes have been attacked as an unconstitutional burden on interstate commerce because such taxes fall on a commodity destined primarily for out-of-state shipment and consumption, with the result that the ultimate burden of the tax is borne by residents of other states.[49] The Supreme Court has upheld the validity of severance taxes where the tax is measured as a percentage of the value of the coal or other resource taken and is applied even-handedly to the severance or production of a resource within a state.[50]

As applied to the states, the due process clause of the 14th Amendment forbids states from imposing confiscatory taxes.[51] The equal protection clause of the 14th Amendment denies a state "the power constitutionally to discriminate in favor of its own residents against the residents of other states members of our federation."[52]

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[45] A state or local tax is exported to the extent that it is shifted from resident owners of capital to out-of-state resource owners or consumers. In order to determine the precise extent to which a tax is exported it is necessary to identify the economic incidence of the tax on a geographic basis. The geographic impact of a tax depends on the extent to which it is absorbed by the statutory taxpayers, or is shifted forward or backward to others who bear the economic burden. The likelihood that a tax will be shifted depends on the type of levy involved. See Section IIA, infra.

[46] *Native American Church* v. *Navajo Tribal Council* 272 F 2d 131 (10th Cir. 1959); *Talton* v. *Mayes* 163 U.S. 376 (1896); *Merrion* v. *Jicarilla Apache Tribe*, 455 U.S. 153–54.

[47] *Western Union Telegraph Co.* v. *Kansas* 216 U.S. 1 (1910).

[48] *Crew Levick Co.* v. *Pennsylvania* 245 U.S. 292 (1917).

[49] *Heisler* v. *Thomas Colliery Co.* 260 U.S. 245 (1922).

[50] *Heisler* v. *Thomas Colliery Co.* 260 U.S. 245 (1922). For a recent treatment of commerce clause limitations on tax exportation by states see C. McClure, Jr. *Incidence Analysis and the Supreme Court: An Examination of Four Cases from the 1980 Term*, 1 *Supreme Court Economic Review* 69 (1982); W. Hellerstein, *Constitutional Limits on State Tax Exportation*. 1 *American Bar Foundation Research Journal* 3 (1982).

[51] *Western & Southern Life Insurance Co.* v. *State Board of Equalization of California*, 101 S. Ct. 2070 (1981).

[52] *Allied Stores* v. *Bowers*, 358 U.S. 522, 532 (1959).

While the provisions of the federal constitution do not apply to tribal actions,[53] there is nothing to prevent Congress from limiting the exercise of Indian tax jurisdiction by tribal governments were they aggressively to pursue tax policies that transgress basic precepts of interstate fiscal fair play. That is, it is altogether conceivable that Congress could intervene to limit the power of Indian tribes to enact tax systems consising only or primarily of exportable taxes or taxes that were confiscatory.

2. The Indian Civil Rights Act

The Indian Civil Rights Act of 1960, 25 U.S.C. § 1302 imposed upon tribes the due process and equal protection requirements of the 14th Amendment. Non-Indians and Indians alike can challenge the exercise of tribal tax authority under Title II, Section 202 of the Act, 25 U.S.C. § 1302(8):

> "No Indian tribe in exercising powers of self-government shall—
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> * * * * * * *
>
> (8) deny to any person within its jurisdiction the equal protection of its laws or deprive any person of liberty or property without due process of law."

To date no challenge to a tribal tax ordinance has been brought under section 202 of the Act. In principle, an action could be brought against a tribal tax in a tribal court, for example, against a severance tax, on the ground that the tax violates the due process clause because the rate is confiscatory, or the tax violates the equal protection clause because the burden of the levy rests entirely on non-Indians. However, the provisions of the Indian Bill of Rights Act are not coextensive with the Bill of Rights of the Constitution.[54] The legal status under the Indian Bill of Rights of a tribal tax system that places its entire tax burden on exportable taxes or that is confiscatory is, therefore, uncertain.

In conclusion, neither the federal constitution nor the Indian Bill of Rights presently restricts the scope of the exercise of tribal tax jurisdiction. However, Congress could intervene at any time to take from the tribes the authority to tax non-Indians doing business or deriving income from activities carried on within Indian country. And the Indian Bill of Rights would appear to extend to non-Indians a right to bring an action against a tribal government in a tribal court to challenge a discriminatory or confiscatory tax.

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[53] *Native American Church,* v. *Navajo Tribal Council,* 272 F. 2d 131 (10th Cir. 1959); *Talton* v. *Mayes,* 163 U.S. 376 (1896). *Native American Church* involved the validity of a Navajo Tribal Council ordinance prohibiting the sale, use and possession of peyote. *Talton* presented the question of the application of the Fifth-Amendment to a law of the Cherokee Nation that authorized a grand jury of five persons to institute criminal proceedings. There is no case that specifically addresses the issue of the application of the commerce clause to the exercise of tribal tax authority over non-members. In *Merrion* J. Marshall stated that the commerce clause "does not impose restrictions on tribal activity." *Merrion & Bayless* v. *Jicarilla Apache Tribe* 445 U.S. 130 (1983) at 153–54.

[54] *Stands over Bull* v. *Bureau of Indian Affairs.* 442 F. Supp. 360 (Dist. Ct. Mont. 1977), appeal dismissed 578 F. 2d 799; Janis v. Wilson, 1143 (Dist. Ct. S.D. 1975), *Lohnen* v. *Cloud,* 366 F. Supp. 619 (Dist. Ct. N.D. 1973). See Comment, *The Indian Bill of Rights and the Constitutional Status of Tribal Government,* 83 *Harv. L. Rev.* 1343 (1969).

Chapter II—Tribal Taxation and Economic Development

A. INTRODUCTION

The tax systems of the federal and state governments reflect the economic institutions of a highly developed, industrialized society. American Indian tribes are struggling toward economic independence and industrial growth under institutional arrangements that are as yet relatively undeveloped. Therefore, the federal experience is of a limited analytical value to those tribes that now seek to develop a separate tax capability within the federal-state governmental structure.

However, the economic criteria by which a tax structure is to be judged are of universal application. The principal facts that must be taken into account are: the effects of the tax on incentives and economic efficiency; the fairness of the tax as between persons of like taxable capacity (horizontal equity); the effects of the tax on income redistribution between rich and poor (vertical equity); simplicity, ease of understanding, and absence of excessive administration and compliance costs.

Treated exhaustively, a study of the characteristics of an optimum tax system for developing local governmental units existing within the framework of a developed federal-state system could easily fill volumes. To keep the subject manageable, the scope of this study is limited to a consideration of four issues: (1) The characteristics of an optimum tax system; (2) Economic factors that bear on tax structure design in a developing country; (3) Choice of tax base; and (4) Coordination of tribal tax systems with the state and federal tax systems.

B. THE CHARACTERISTICS OF AN OPTIMUM TAX SYSTEM

1. Incentives and economic efficiency

Taxes have an important effect on incentives and opportunities to work, to save, to invest, to take risks and innovate, to use resources efficiently, and to allocate resources to uses which best serve the needs of the people residing within the jurisidiction of the taxing authority. The ways in which a given amount of tax revenue is raised have differing effects upon economic opportunities and incentives.

A personal tax has both an "income effect" and a "subsitution effect." A tax on income reduces the taxpayer's spendable income with the result that he may work harder to restore in part his post-tax income (the income effect). At the same time, a higher marginal tax imposed on income reduces the net spendable income which the taxpayer can get from an additional hour of work. This reduction in the extra goods and services that he can earn from an hour's work will tend to make the taxpayer prefer leisure to work (the substitution effect). The substitution effect of a personal tax is an indication of economic inefficiency and waste, even if it does no more than offset the influence of the income effect. The substitution effect of a tax on income can take many forms. The professional may move to a lower tax jurisdiction. The wage earner may reduce his hours of work in order to substitute untaxed do-it-yourself activity at home for taxed work. The homemaker may substitute untaxed domestic work for taxed earnings outside of the home. The businessperson may substitute an easy life for the effort necessary to expand an existing enterprise. A saver may substitute present consumption for future consumption because the tax on the income from savings makes deferral of consumption unattractive. The variety of substitution effects is as diverse as the economic activities of the taxpayers.

Taxation of business income may cause other kinds of distortion. It may lead to a choice of a form of business organization that minimizes tax liability but is not the most appropriate and efficient for the particular activity in hand. Or taxation may lead to the substitution of a less profitable, more stable business for a more profitable but less stable enterprise to avoid the progressive marginal tax rate on higher income.

Taxation of consumption, by specific excise taxes also may cause distortions. Suppose that a consumer has income sufficient to purchase one loaf of bread a[illegible] quarter pound of butter and that the division of this income between bread and butter is optimum, given the level of income. Now impose a tax on butter. The result is that the consumer has less spendable income (the income effect) and the relative after-tax price of butter is higher (the substitution effect). As a result the consumer must reduce his purchase of bread, or butter, or both. The situation differs, however, with a general tax on consumption, applied at the same rate, let us say, to bread and butter. The consumer has less after tax income to spend on both bread and butter (the income effect) but since both are taxed, the relative after-tax prices of both bread and butter are unchanged and there is no substitution effect.

Little is known of the importance of substitution effects because it is difficult to obtain and interpret the relevant information. In principle it is a question of fact whether in any specific sector the substitution effect is large or small.

A corollary of the need to keep margin tax rates down is a general presumption in favor of a broad based tax system and a tax system which comprises several different taxes. Distortions affecting incentives and economic efficiency are minimized if the tax system is confined to two or three well defined bases whose nature can be easily understood by the taxpayer. Substitution distortions also are minimized if a given revenue is raised by means of low rates of tax spread over a broad tax base covering a multiplicity of economic activities. For this reason it is important to resist erosion of the tax base through the allowance of exemptions, deductions, and other special purpose relief provisions. Substitution distortions also are minimized if the tax system comprises a large range of different taxes at different rates on a broad range of economic activities. In theory there exists a distinct optimum rate of tax for each different kind of transaction. That is, an ideal system of taxes would impose high rates wherever the incentive effect was favorable and low rates wherever it was unfavorable. For example, if land were fixed in amount and always let out for use in the activity which yielded the highest possible pre-tax rent, a tax on land would fall solely on the landowner; the uses of the land would be unaffected, and no distortive inefficiencies would be introduced.

2. Horizontal and vertical equity

Any tax system will have income distributional effects even if it is only a matter of deciding who should bear the burden of financing a given level or kind of government expenditure. Such distribution effects are less persuasive, however, than the income redistributional effects of a tax system expressly designed to improve the relative position of the poorer members of the society. The equity of a tax system must be judged both by the extent to which it treats fairly and equally those members of the society who are equally rich or poor (the horizontal equity criterion), and by the extent to which the tax redistributes income from high income to low income groups (the vertical equity criterion).

There will inevitably be some clash between the criterion of economic efficiency, which requires low marginal tax rates in order to minimize substitution distortions, and the criterion of vertical redistribution, which requires higher average rates of tax on the rich. The final choice of the redistributional aim for a tax system requires a balancing of redistributional and efficiency considerations. For example, should differences in needs or tastes be considered in comparing taxable capacities? Should the taxable capacity of persons in different family conditions be taken into account? What is the nature of the tax units which it is fair to employ for comparisons of taxable capacity—the individual, the nuclear family, the extended family, the household. These questions involve value judgments as well as efficiency considerations and therefore constitute a basic task for political decisions.

3. Simplicity and costs of administration and compliance

A good tax system is coherent, straight forward, and simple. Tax burdens which are disguished by complexities in the devising or administration of the tax or by uncertainties in its application do not satisfy the criterion of simplicity. Related to the criterion of simplicity is the question of certainty as to the amount of tax that should be paid on each taxable object or transaction. The principle on which the tax base is chosen should be easy to perceive. That is, the taxpayer should be able to understand the purpose intended to be served by the choice of the particular form of tax.

Finally, in a federal society a tax system for a local governmental unit (including state, county, municipality, Indian tribe) must be capable of integration with the tax systems of the other independent layers of government. The tax systems of all layers of government, taken together, must make a coherent whole.

Ease of administration is an aspect of simplicity. Governmental costs of enforcement and private costs of compliance are reduced if the tax system is simple, straight forward and precise. The more straight forward are the taxpayer's obligations, the less time and trouble need be spent on the preparation of tax returns and the less scope for expenditure of time and resources on the search for complicated ways to reduce tax liability.

C. ECONOMIC FACTORS THAT BEAR ON TAX STRUCTURE DESIGN IN A DEVELOPING COUNTRY.

1. Tribal economies

There are two-hundred-seventy Indian reservations, twenty-four trust reserves, and one hundred federally owned land areas set aside for Indians. There are fifty-one million acres of Indian country, consisting of forty million acres of tribal land and eleven million acres of allotted land owned individually. The size of these areas ranges from fourteen million acres for the Navajo reservation with a population of 100,000 Indians to single-acre California "rancherias" with no resident population.[55]

The economies of the Indian tribes display the principal characteristics of less developed economies generally: low rate of capital formation; high unemployment; limited margin over subsistence for a large percentage of the population; high percentage of the population engaged primarily in subsistence agriculture; a relatively small market sector. The reasons for Indian poverty are many: cultural and geographical isolation, lack of reservation educational opportunities, undeveloped reservation-based natural resources, and a value system that restrains individual self-seeking in favor of family or clan.[56] In contrast to the poverty of most Indians, there are a few Indians, owners of allotted lands, who receive substantial sums from the rental of these lands to non-Indians for mining, exploration, grazing, residential and business development. At present this rental income is not taxed for the benefit of the tribe as a whole and thus flows out of the reservation economy as it is spent on goods and services produced off the reservation.

The economic presence of non-Indians on most reservations is a significant one. Non-Indians are engaged in mining, construction, wholesale and retail trade, and to a lesser extent, in government services. Indians are employed principally in the agricultural and service sectors, including government service. Typically, personal income per capital of Indians living and working on a reservation is lower than that of Indians who live on the reservation but are employed off the reservation.

2. Tax structure for a developing economy [57]

The economic structure of Indian tribes, like that of underdeveloped economies generally, imposes severe limitations on the structure of a tax system. The predominance of agriculture and the difficulty of reaching it through income taxation suggests that land taxes should predominate. However, most Indian land is owned by the separate tribes and leased to non-Indians. It therefore is not available for inclusion in the tax base of a tribal tax system. However, the rental income could be used, and to some extent presently is used, to finance governmental services.

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[55] Joint Economic Committee, 91st Cong. 1st Sess., *Toward Economic Development for Native American Communities*, (Comm. Print 1969).

[56] See, for example, Iverson, *The Navajo Nation*, Greenwood Press (1981); B. Taylor & D. O'Connor, *Indian Manpower Resources in the Southwest*, Bureau of Business and Economic Research, College of Business Administration, Arizona State University (1969); H. Hough, *Development of Indian Resources*, The Indian Community Action Program, Arizona State University (1967); *The Navajo Nation: An American Colony*, Report of the United States Commission on Civil Rights (1975); *The Farmington Report: A Conflict of Cultures*, Report of the New Mexico Advisory Committee to the United States Commission on Civil Rights (1975); *Navajo Political Process*, Smithsonian Institution Press (1970).

[57] This section borrows heavily from G. Meier, *Leading Issues in Economic Development*; (3d. ed. 1976). Bird & Oldman, *Readings on Taxation in Developing Countries* (1967 ed.); and H. Hinrichs, *A General Theory of Tax Structure Change During Economic Development* (1966).

Outside of agriculture, there is some manufacturing in small-scale establishments that might be reached by a manufacturing excise tax. Personal income tax, to the extent that it can be applied at all, should be imposed on a schedular, nonglobal basis. That is, the tax should be assessed separately on distinct sources of income and not as a personal tax on total income received. Effective taxation of wage income probably is limited to the wage income of civil servants and employees of the large non-Indian companies that have leased Indian lands for exploitation and development. Determination of business income in a developing economy is very difficult. If the business is operated without an adequate accounting system, it may be necessary to determine it on a presumptive basis; that is, by applying stipulated margins to estimated sales. Effective taxation of corporations most likely is possible only for the large non-Indian-owned firms doing business on reservation land.

It is possible to design a tax system of interlocking taxes that would assure a high level of taxpayer compliance. Such a system would tax income, expenditure, and net worth. Given the true base for any two of the three taxes, the true base for the third can be determined. However, a self-checking system is unrealistic for a developing economy without a history of tax administration and a high level of administrative skills. Therefore, it is essential to construct a tax system that will enforce fines for underreporting, prosecute offenses, and minimize opportunities for evasion by the taxpayer and collusion stemming from discretion by the tax collector.

3. Taxation for economic development

The primary economic goal of the Indian tribes, similar to that of underdeveloped countries, is substantially to increase the rate of economic growth and to raise the level of per capita real income of the tribal members. This goal can be attained by the provision of additional essential governmental services, particularly in education, public health, and transportation. This goal can be attained also by increasing the rate of capital formation in production facilities—whether in the governmental or the private sectors. The specific goal of taxation for economic development is to achieve that rate of capital formation that will permit the maximum rate of growth in gross tribal product feasible under the circumstances. The role of taxation is to restrain consumption so that the amount of investment needed for non-inflationary growth can be undertaken and to do so in such a way that the consumption of higher income groups is restrained more, proportionately, then the consumption of the lower income groups.[58]

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[58] See Toye, *Taxation and Economic Development* (1978); G. Meier, supra.

The primary economic goal requires a transfer of resources from the private sector to the tribal governmental sector for the production of government services. The specific goal requires a transfer of resources to capital formation for both tribal and individual Indian enterprises. In the context of the tribal-state relationship the major source from which these resources can be drawn is taxation of non-Indians carrying on economic activity within Indian country: business license fees, business gross receipts taxes, possessory interest taxes on mineral leases, severance taxes on mineral production. Because Indian-economies are characterized by a limited margin over subsistence and a high percentage of the reservation population is engaged in subsistence agriculture rather than in producing for the market, a graduated, net income tax on tribal members and on business entities is not a feasible revenue source. However, rental income received by Indian lessors of allotted lands should be reached by a tax withheld at source by the lessees. In addition, low rate taxes on present use for consumption within Indian country should be considered: a general sales tax, sumptuary taxes on liquor and tobacco, and personal property taxes. A low rate payroll tax on reservation employees, withheld at source, is also a possible source of revenue for economic development.

The volume of income produced within a geographical area, regardless of where the recipients of that income reside, determines the taxable capacity of the area. Both income received, in the form of wages, salaries, dividends, interest, rents, profits, and income produced can provide a basis for taxation. Income received is taxed by an income tax. Income produced is taxed by general sales or gross receipts taxes, severance taxes, or property taxes. These two values, income received and income produced, are not equivalent in any one taxing jurisdiction because income produced in one area may be received by residents in other areas.

(a) License fees and charges

There are many kinds of taxes in the form of fees, licenses and charges: drivers' licenses, motor vehicle registration taxes, corporation licenses, hunting and fishing licenses, alcohol and tobacco sales licenses. Such taxes are pecuniary charges levied for the privilege of carrying on economic activity and for using governmental services within the taxing jurisdiction. If an economic charge were not levied for these services their cost would be a burden upon the over-all budget of the government; that is, the cost would be borne by all taxpayers within the jurisdiction. There are advantages to using specific fees and charges to pay for government services. The person enjoying the privilege is not compelled to pay the charge; he can always forego the privilege. If he pays the charge it is certainly, in part, because he feels he receives a specific measurable benefit from the government. Further, such taxes tend to have a favorable effect on incentives because the goods and services for which the fees are charged tend to be in strong demand. All fifty states in the United States levy annual license fees and charges.

The average per taxpayer annual fee or charge for each tax is as follows:[59]

Motor vehicle registration	$32.86
Drivers' license	2.63
Corporation license	501.64
Hunting, fishing license	6.19
Alcohol sales license	683.23

Twenty-seven tribes levy an excise tax on tobacco and alcoholic beverages.[60]

(b) Business activity taxes

A common form of business activity tax is a levy on "the privilege of engaging or continuing in business or doing business" within the taxing jurisdiction measured as a fraction of gross proceeds of sale, gross income, or gross values. The base of such a tax is the sale of all current output, including both consumer and capital goods. The average effective tax rate for all fifty states is 6.32 percent.[61] In economic effect the tax is similar to a general retail sales tax or a low-rate turnover tax.[62] The tax may be passed on to consumers of the output by an increase in absolute prices charged by the statutory taxpayer; it may be absorbed by the owners of capital; or it may be passed on to producers of the output by a reduction in wages paid by the statutory taxpayer. If the producers, owners of capital and consumers of the taxed output reside in the taxing jurisdiction, the result in all cases is a reduction in disposable income within the taxing jurisdiction, but no tax exportation. If the producers, the owners of capital, or the consumers reside outside the geographic boundaries of the taxing jurisdiction, the tax may be exported. For example, in the case of the Indian tribes the tax would be exported if the producers are Indians employed on the reservation and the consumers of the output reside off the reservation, and the tax is passed onto consumers.[63] Eighteen tribes have enacted business license or business activity taxes.[64]

(c) Personal property taxes

A tax on personal property, for example, on houses, motor vehicles, and farm animals, offers less danger to incentives than do levies directly related to the earning and use of income. Further, if income is not taxed or is taxed at a low flat rate, the taxpayer would likely increase his work-effort in order to recoup the income lost to the personal property tax. Most states do not tax business personal property, such as inventory and equipment, that is not permanently installed because such property can be readily moved to another jurisdiction. They also exclude intangibles, jewelry, silver and other personal household furnishings that can be easily hidden from the tax collector.[65] Seven tribes have enacted property taxes on the value of leasehold interests.[66]

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[59] Advisory Commission on Intergovernmental Relations *Tax Capacity of the Fifty States: Methodology and Estimates* 19 (1982) hereinafter cited as *Tax Capacity*.

[60] See Appendix—Tribal Experience, infra.

[61] Id. *Tax Capacity*, supra.

[62] A turnover tax is a single stage value added tax imposed on all transfers for a consideration in the production and distribution of goods. Transfers within a single firm are excluded from the base of the tax. Business activity taxes are not generally classified as general sales taxes. S. Cnossen, *Excise Systems: A Global Study of the Selective Taxation of Goods and Services 11* (1977).

[63] The consensus is that business activity taxes and general sales taxes are fully shifted forward to consumers. C. McClure, Jr. *Commodity Tax Incidence in Open Economies*, 17 *Nat'l. Tax J.* 187 (1964); C. McClure, Jr. *The Interstate Exporting of State and Local Taxes: Estimates for 1962*, 20 *Nat'l. Tax J.* 49 (1967).

[64] See Appendix—Tribal Experience, infra.

(d) Possessory interest tax

A possessory interest tax is based on the market value of a leasehold. It is a form of property tax. The principal problem with this form of property tax is one of valuation. There are several different approaches: the present discounted value of the rental saving where the contracted rent is less than the fair market value of the leased premises;[67] the present discounted value of anticipated gross income less necessary expenses;[68] the value of the whole property minus the value of the leased fee which should be the same as the present discounted value of the difference between the economic rent from the whole property and the contract rent to the lessor for the lease period.[69]

Of all the forms of taxation, a property tax on the leasehold interests owned by non-Indian lessees of reservation natural resources offers the least danger to economic development per dollar of revenue obtained. The nation-wide shortage of energy resources brought about by rapid economic growth and the price increases forced by the OPEC countries have brought sharp increases in natural resource values reflecting economic rent. This is the surplus return to a non-Indian lessee over and above the minimum return necessary to induce him to engage in on-reservation mineral production. Taxation of these rapidly increasing leasehold values would have no effect upon Indian development, would lessen dependence on other tribal taxes, and has the substantial merit from an equity standpoint of returning to the Indian tribes a portion of the surplus created by world market conditions. This true whether the tax is borne by the non-Indian owners of capital in the form of a reduced rate of revenue or is borne by the non-Indian consumers of the mineral resources in the form of higher prices. In either case, the tax would be exported. Four tribes have enacted possessory interest taxes.[70]

(e) General sales tax

Indirect (commodity) taxes typically play a major role in the tax structures of developing economies. The principal economic argument for indirect taxes is that they are not directly related to the earning of income and thus are not a work disincentive. At the same time, indirect taxes raise the costs of consumption relative to saving and thus are an incentive to increase the percentage of income saved. If basic subsistence expenditures are excluded from the tax base the tax does not violate the usual standards of equity.

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[65] Hellerstein and Hellerstein, *State and Local Taxation, Cases and Materials*, Ch. 5, (1982).

[66] See Appendix—Tribal Experience, infra.

[67] *St. Louis County* v. *State Tax Commission*, 406 S.W. 2d 644 (Mo. 1966).

[68] *De Luz Homes Inc.* v. *County of San Diego* 290 P. 2d 544 (1955).

[69] See R. Ricks, *Possessory Interests in Publicly Owned Property: Improperly Assessed*, 20 *Nat'l. Tax J.* 347 (1967).

[70] See Appendix—Tribal Experience, infra.

If there were no local production of the taxed items, a general sales tax would in fact amount to an import duty.

A general sales tax, like the different business activity taxes, is imposed on the gross receipts of firms. Unlike taxes measured by gross receipts, however, general sales taxes may differ in their degree of generality. The tax may be imposed on the sale of both capital and consumer goods and services or on the sale of consumer goods and services only. State sales taxes differ from the European value-added taxes in that they are imposed at the final (retail) stage and not in multiple stages. The base of a general sales tax, however, is the same as that of a value added tax and the incidence is similar.[71]

In an economy where all income received is spent and personal savings are zero, a general sales tax on consumer goods and services is similar to a tax on all income. That is, the base of a general sales tax is less than the base of an income tax by the amount of saving. Imposed as a tax on the retail sale of consumer goods and services, a general sales tax is reflected in an increase in the retail price of the taxed goods and services. This means that at the higher price the same level of money wages will purchase fewer consumer goods, with the result that the real income of consumers is reduced. At the same time, the price of capital goods is unchanged, leaving savers (whose savings are invested in capital goods) relatively better off. The burden of a general sales tax thus depends on how the wage earner (consumer) divides his income between consumption and saving. And, since the ratio of consumption to saving falls when moving up the income scale, the ratio of tax burden to income also falls by income level. That is, a general sales tax is inclined to be regressive.

Applied to the economy of an Indian reservation, several steps could be taken to counteract the inherent regressivity of a general sales tax. The rate could be kept low, 4 to 6 percent. Food, medicine, medical services and other essential items could be removed from the tax base. Sales tax exemption certificates could be issued to retired, unemployed, or disabled persons. Seven tribes have enacted a general sales tax.[72]

(f) Selective excise taxes

An excise tax is a selective tax on specific goods and services. Unlike a general sales tax on all commodities and services other than those specifically exempted, excise taxes can serve both a revenue and a regulation function. For example, excises can control the consumption of sumptuary goods such as liquor and tobacco. Excises can be imposed on nonessential or luxury items such as theater tickets, petroleum products, and jewelry that are considered proxies for taxpaying capacity. Excises on services such as those related to restaurants, hotels, club dues and transportation might also come within the luxury category. Related to the sumptuary excises are regulatory type taxes on air and water-polluting firms designed to internalize external diseconomies generated by the producer.

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[71] Consider a finished product, such as a loaf of bread. Following it through the successive stages of production, we begin with the farmer selling wheat to the flour mill, the flour mill selling the flour to the baker, the baker selling the bread to the grocer, the grocer selling the bread to the customer. At each stage the value of the bread is increased and the sales price rises accordingly. Each increment in price reflects the value added at that stage. The value or price of the final product equals the sum of the increments or values added at each successive stage. A value added tax imposed on the increments is thus identical in its base to a retail sales tax imposed on the final value of the product. Indeed, the value added tax is collected as a sales tax in France, Germany, and Mexico. For example, assume a four stage product with the value added at each stage to be $100, $200, $50, and $20. A multistage value added tax of 10 percent would be equivalent to a single tax of $37 imposed at the last stage, the sale to the consumer.

[72] See Appendix—Tribal Experience, infra.

There are two kinds of excise rate schedules. A unit or specific excise is one where the rate is expressed as a fixed amount per unit. An *ad valorum* excise is one where the payment is expressed as a specified proportion of the value of the commodity. Value may be based on invoice price or on a constructive or appraised value determined by the excise authorities.

Effective rates on traditional excise goods are high in most states. The average tax for state purposes is: [73]

Highway fuel consumption in gallons (tax per gallon)	$0.0794
Consumption of distilled spirits (tax per wine gallon)	5.69
Cigarette consumption in packages (tax per packages)	.1311

Twenty-three tribes have enacted excise taxes on the sale of cigarettes, liquor, heating fuel, native handicrafts, and construction materials. The rates vary from 5 percent to 15 percent.[74]

Selective excises, unlike a general sales tax, affect economic choices, not only in relation to the taxed commodity but also in relation to commodities not taxed. The effect ultimately is to distribute real income among consumers, owners of firms, and suppliers of labor services. This distributive effect is the incidence of the excise. In general, if the supply of the taxed good is elastic and the demand for it is inelastic, the consumer will bear the burden of the tax in terms of paying a higher price for the taxed item.[75] For example, the demand for alcoholic beverages and tobacco products is generally assumed to be relatively inelastic. The result is that alcohol and tobacco excises can be a significant source of revenue as well as exercising a regulatory function. It may well be that a tribal tax on native handicrafts purchased by non-Indians is relatively inelastic because the articles are unique and the tribe accounts for a major portion or all of the domestic production.[76] On the whole, excise burdens are assumed to fall on consumers and to be distributed on the basis of consumption of the taxed items.[77]

(g) Severance tax

A severance tax is a tax based on the privilege of severing minerals, the business of mining, or the value of production. Tax formulas for production taxes may be based on net proceeds, gross proceeds, quantity severed, or on the privilege of doing business. The immediate effect of the tax is to reduce the net income of the producers. Since the base of the tax is physical output or gross price, the tax may have a less restrictive effect on production than an income tax imposed on net earnings. On the other hand, a major objection to this form of tax is that it is applicable whether or not the overall operation of the producer is profitable. The tax is exported, in whole or in part, to nonresident producers and consumers if the exaction falls on mineral resources destined primarily for shipment and consumption outside of the taxing jurisdiction.[78]

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[73] *Tax Capacity*, supra at 19.

[74] See Appendix—Tribal Experience, infra.

[75] The concept of elasticity of supply indicates the degree of responsiveness of the quantity supplied to changes in market price. Conversely, the concept of elasticity of demand indicates the degree of responsiveness of the quantity demanded to changes in market price. Supply is elastic if the percentage rise in the quantity supplied is greater than the percentage rise in price bringing about the increased supply. Demand is inelastic if the percentage increase in price evokes a lesser percentage in quantity purchased.

[76] R. Goode, *Government Finance in Developing Countries*, ch. 7, (1984).

[77] S. Cnossen, *Excise Systems: A Global Study of the Selective Taxation of Goods and Services*, ch. 4 (1977).

Applied to severance taxes imposed by Indian tribes on non-Indian mineral lessees, the degree of tax exportation to out-of-state consumers depends on the extent to which the reservation dominates the relevant market for the natural resources.[79] If the relevant market is nationwide and includes alternative sources of supply, the tribe may not dominate the market and little, if any, of the tax may be shifted forward to consumers. The tax also would not be exported to non-Indian consumers, absent market dominance, if demand for the resource were elastic. The tax would be exported to non-Indian lessees or to non-Indian shareholders to the extent that it captured for the tribe the short run economic rents on the leases. Finally, because the severance tax is a deductible business expense for federal income tax purposes, a part of it (46 percent) would be shifted to the federal government in any event.

Twenty-seven of the fifty states presently impose one or more severance taxes on mineral resources. Average tax rates by mineral resource are as follows: Value of oil and gas production: 4.86 percent; value of coal production: 2.11 percent; and value of nonfuel mineral production: .07 percent.

Eleven tribes have enacted severance taxes at rates ranging between 1 and 10 percent.[80]

(h) Payroll tax

Payroll taxes are imposed by the federal government at the source for social security and social insurance coverage. Payroll taxation is also used by local governments (cities, counties, school districts) as an approximation to a local income tax. Local earnings of nonresidents, as well as residents, are included in the tax base. A payroll tax is withheld at source and collected from the employer. The tax is on gross earnings and no allowance is made for personal dependency exemptions and deductions. The employee does not have to file a return except to claim a refund of excess tax withheld. Self-employed persons must file a return since there can be no source withholding.

The payroll tax is an ideal tax from an administrative point of view. It brings in substantial revenue while involving a minimum of complexity and compliance costs. However, it is an inequitable tax because income from capital (dividends, interest, capital gain) is excluded from the tax base. The tax is only tolerable if imposed at a low rate.

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[78] C. McClure, Jr., *Incidence Analysis and the Supreme Court: An Examination of Four Cases from the 1980 Term.* 1 *Supreme Court Economic Review* 69 (1982).

[79] *Tax Capacity* supra at 128–31; 18–19.

[80] See Appendix—Tribal Experience, infra.

A review of payroll taxes imposed by local governments shows the following range of rates:[81]

- 1 percent of gross wages
    - Birmingham, Alabama
    - Cities and Counties of Georgia
- ¾ of 1 percent of gross wages
    - Cities and Counties of Kentucky
- ¼ of 1 percent of wages; ⅜ of 1 percent of self-employment income
    - New York City
- 6/10 of 1 percent of wages
    - Cities and Counties of New Hampshire
- 4 percent of state source income in excess of $2,000 received by non-residents
    - New Hampshire

One tribe, the Umatilla, has proposed enacting a payroll tax of 4 percent.[82]

4. *How should the tax be collected*

The administrative provisions of any tax code should cover the following functions:

1. Determination of tax base;
2. Determination of the taxpayer and time of payment;
3. Administration of exemptions or exempt persons;
4. Duties of the taxpayer and other persons;
5. Powers of the Revenue Commissioner; and
6. Penalties.

Assuming that the legislative draftsmen have precisely defined the tax base (sales price, gross income, gross receipts, value in production, market value) the beginning of tax administration lies in finding out who are the individuals or units intended to be covered by the tax and putting them on the tax rolls. Lists or registers of taxpayers should be made for each tax imposed: property owners, business concerns, employers, employees. There are many possible sources of names for these registers: local property rolls, registration of voters, visual inspection of properties, records of new construction, records of other government departments, membership lists of trade associations, automobile registration. Even telephone books can be useful.

Initial compliance with a payroll tax is had by withholding the tax at source on wages and salaries. Initial compliance with a retail sales tax, severance tax, and business license fees and charges must rely on accounting controls and the voluntary filing of self-assessed returns by taxpayers. However collected, the tax administration should furnish tax returns free of charge to the persons having the legal obligation to pay the tax.

No tax system will work effectively unless its administrators check the correctiveness of the taxpayers' actions. A passive attitude towards errors, falsifications, and failures to report, undermines the entire structure because there is no protection for those who comply. Obviously, it is not administratively feasible to audit every taxpayer. The objective of a program of investigation and examination should safeguard the government from major loss and, insofar as is possible, remove the element of audit lottery from the compliance process. Any audit program must be capable of completion within one year since each year inexorably brings a new set of returns to be examined.

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[81] *Commerce Clearing House, State Tax Guide, All States,* (2d ed. 1980).

[82] See Appendix—Tribal Experience, infra.

There are no simple criteria to govern the selection of returns for audit. Generally, if the withholding procedure on payroll taxes is effective, employees would file a return only to claim a refund of overwithheld tax and only these returns would have to be checked for accuracy. Similarly, little checking would be required for retail sales taxes withheld at source. Licenses, fees and charges based on gross income or gross receipts of business conducted on the reservation could be checked periodically and on a random basis. Taxes on personal property, including possessory interest taxes, ordinarily are determined by an assessor. Severance taxes imposed on natural resources companies probably should be routinely audited on a schedule that insures that each company would be checked once in a period of years.

A procedure for handling and resolving tax controversies is the next stage of tax administration. Essentially the procedure should furnish internal methods of settlement at the administrative level and external methods of judicial consideration if settlement at the administrative level cannot be reached. For the dispute resolution procedure to work effectively, most controversies should be settled administratively.

The goal of tax administration is collection of the tax. A sure sign of ineffective tax administration is the presence of large deficiencies in tax payments. Taxpayer rolls and registers should be so maintained that taxpayer delinquency can be immediately spotted. Delinquency should be followed promptly by the imposition of penalties. Hence, the tax law must provide for the imposition of liens on property and for the garnishment of wages and salaries. Because Indian tribes have the power to exclude non-Indians from Indian country, they can resort to the collateral device of expulsion for failure to pay taxes. In addition, non-payment should be made expensive. Taxpayers should not, through delay in payment, in effect obtain a low-rate interest or interest-free loan from the tribal government. Interest at a rate as high or higher than the commercial rate should automatically be charged for late payment.[83]

5. How should tax revenues be spent [84]

The effect of a particular tax on incentives to work or to take risks depends in part on the purpose for which the tax revenue is used. For example, a payroll tax has both an income effect and a substitution effect. The taxpayer may increase work effort to recover the loss of real income (income effect), or work less because the real rate of pay is less and at this lower rate leisure competes favorably with income (substitution effect). If the payroll tax proceeds were used to provide free goods and services for low income and untaxed Indians, unemployed Indians, sick or retired Indians, the income and substitution effect of the payroll tax on employed persons would be unaffected. The net effect of the tax and transfers would be a highly progressive tax on persons employed on the reservation. If the services distributed by government are complementary to private consumption, for example, a gasoline tax is used to finance road construction, the government expenditure can be regarded as subsidy to all those persons (Indian and non-Indian alike) who buy cars for use on the reservation. Incidentally, with better roads, persons employed on the reservation may increase their work effort in order to be able to afford a car.

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[83] For a detailed treatment of problems and issues of tax administration see P. Kelley & O. Oldman ed., *Readings on Income Tax Administration* (1973).

[84] For a general discussion of tax and expenditure incidence see R. Musgrave & P. Musgrave, *Public Finance in Theory and Practice*, ch. 16 (1976).

Take as another example, business license fees and charges, the severance tax, other company taxes: considered alone, these taxes have an adverse incentive effect on private capital, saving and investment. However, if the tribal government were to spend the revenue from these taxes on infrastructure (roads, bridges, public health, education, law enforcement) from which the taxed companies and their employees benefit, the positive income effect on the expenditure side would offset the negative income (disincentive) effect on the revenue side. It is possible that the net effect would be to increase private saving and risk taking and to attract non-Indian business investment to the reservation.

CHAPTER III.—COORDINATION OF TRIBAL TAXES WITH STATE AND FEDERAL TAXES

A. THE CONCEPT OF TAX JURISDICTION

The limit of the taxing jurisdiction of a government in real terms is the point at which the government defers to the countervailing power of another government over the same subject matter. A nation, state, municipality, or Indian tribe incurs costs in providing governmental services. Taxes pay for these services and governments accordingly levy taxes on those persons who benefit from such services. A fundamental issue of tax jurisdiction is determining who "consumes" governmental services and which jurisdiction has contributed to the ability of the taxpayer to derive the economic gain in question.

For the individual or business enterprise carrying on economic activities in two or more tax jurisdictions the fundamental issue of taxation is determination of the jurisdiction or jurisdictions to which a tax must be paid. Double or multiple taxation of a single economic transaction or income source may occur where one jurisdiction imposes income taxes on the world-wide income of its residents and business entities and the other jurisdiction taxes nonresident persons and entities deriving income from sources in the taxing country or from carrying on economic activities there. Double or multiple taxation may occur also in the state-tribal context where both the state and the tribal government impose excise taxes on the same economic activity, for example, doing business, selling at retail, mining. Double taxation can also occur in the state-federal and tribal-federal context if the state or tribe were to impose an income tax on its residents or members. The different mechanisms by which double or multiple taxation is alleviated are referred to as tax coordination.

Coordination of tribal taxes with the state and federal tax systems is complicated by two factors, not present in the case of the integration of the French and United States tax systems, let us say, or even of the federal and state tax systems: The inherent sovereignty of Indian tribes "exists only at the sufference of Congress and is subject to complete defeasance, "*United States* v. *Wheller,*" 435 U.S. 313, 323 (1978); the territorial boundaries of a tribe's jurisdiction are prescribed by federal statutes, 18 U.S.C. § 1151, and include tribal land, individual allotments, and land held in fee by tribes and individuals whether Indian or non-Indian. Tribal land is held by the United States in trust for the tribe and cannot be sold or leased without Federal consent, 25 U.S.C. § 177. In short, a tribe is a political community having defined territorial boundaries within which tribal authority is exclusive and guaranteed by the federal government. *Worcester* v. *Georgia* 6 Pet. 515, 557 (1832). If incorporated under the Indian Reorganization Act the tribe may also be a membership corporation.

In the context of two sovereign states, the mechanisms for coordination of two or more tax systems are the foreign tax credit [85] and the exemption of foreign source income.[86] In the context of the states and the federal government, the deduction mechanism is used.[87] In the context of Indian tribes and the states there is no defined method for avoiding double taxation because fiscal conflict between the two tax systems is viewed in terms of the non-tax concepts of inherent Indian sovereignty and federal regulatory preemption. In the context if Indian tribes and the federal government, Congress recently enacted legislation permitting a nonbusiness deduction against federal taxable income for certain tribal taxes.[88] Business taxes paid to tribal governments have always been deductible against federal taxable income.[89]

B. TRIBAL-STATE FISCAL CONFLICT

Tribal governments assert jurisdiction to tax on a territorial basis. That is, they tax Indians living and carrying on economic activities on the reservation on reservation-source gain [90] and non-Indians using tribal property or carrying on business activities on the reservation.[91] Tribal governments can also tax tribal lands even though they are exempt from State and federal taxation.[92] Tribal governments have not so far asserted jurisdiction to tax tribal members living and working off the reservation.[93] In the case of tribal members living on the reservation, but earning income off the reservation, the tribes have so far excluded non-reservation source income from the tax base entirely whether or not the non-reservation-source income is "repatreated" to the tribe by the member. If the states were to assert jurisdiction to tax on a territorial basis, and, in addition, were to exclude Indian country from their territorial limits, there would be no problem of double or multiple taxation. However, an Indian tribe is physically located within the territorial limits of a state, in much the same way that a city or country is located within the territorial limits of a state. Therefore, while under the territorial principle a tribe does not assert jurisdiction to tax off-reservation economic activities, the states under the territorial principle have asserted jurisdiction to tax on-reservation economic activities of both Indians and non-Indians because these activities are physically located within the state's boundaries.

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[85] I.R.C. §§ 901-904. Foreign taxes may be deducted under I.R.C. § 164 in lieu of claiming a credit.

[86] Under a territorial concept of tax jurisdiction a country of source exempts from tax income arising in its territory and paid to a non-resident. It also exempts from tax foreign source income received by a resident.

[87] I.R.C. § 164.

[88] I.R.C. § 7871(a)(3).

[89] I.R.C. § 162.

[90] *Iron Crow* v. *Oglala Sioux Tribe*, 231 F.2d 89 (8th Cir. 1956).

[91] *Morris* v. *Hitchcock*, 194 U.S. 384 (1904); *Washington* v. *Confederated Colville Tribes*, 100 S. Ct. 2069 (1980); *Buster* v. *Wright*, 135 F. 947 (8th Cir. 1906), appeal dismissed, 203 U.S. 599 (1906); *Merrion* v. *Jicarilla Apache Tribe*, 455 U.S. 130 (1981); *Barta* v. *Oglala Sioux Tribe*, 259 F.2d 553 (8th Cir. 1958), cert. denied 358 U.S. 932 (1959); *Iron Crow* v. *Oglala Sioux Tribe*, 231 F.2d 89 (8th Cir. 1956).

[92] See *Conroy* v. *Conroy*, 575 F.2d 175 (8th Cir. 1978). *Conroy* sustained tribal court jurisdiction to order division of allotted land in a divorce proceeding.

[93] See *Montana* v. *United States*, 101 S. Ct. 1245 (1981), holding that the tribe has no jurisdiction over non-Indians hunting and fishing on non-Indian lands within the reservation where no significant tribal interest is shown.

The doctrine of federal regulatory preemption of Indian affairs ousts state tax jurisdiction over Indians residing and carrying on economic activities within Indian Country. *McLanahan* v. *Arizona State Tax Commission* 411 U.S. 164 (1972) (State income tax on Indians resident on a reservation); *Warren Trading Post Co.* v. *Arizona Tax Commission* 380 U.S. 685 (1965) (State gross receipts tax on federally licensed operator of Indian trading post); *Eastern Band of Cherokee Indians* v. *Lynch* 632 F.2d 373 (4th Cir. 1980) (State income and personal property taxes on Indians resident on a reservation); *Bryan* v. *Itasca County* 426 U.S. 373 (1976) (County and state personal property tax on mobile homes located on trust land); *Moe* v. *Confederated Salesh & Kootenai Tribes* 425 U.S. 463 (1976) (State cigarette sales tax, personal property tax, cigarette vendor license tax on reservation source activity).

The source of this immunity is not the doctrine of intergovernmental tax immunities.[94] It is the fact that Congress has not enacted legislation allowing states to tax on-reservation business activities of tribal members: State laws generally are not applicable to tribal Indians on an Indian reservation except where Congress has expressly provided that State laws shall apply. It follows that Indians and Indian property on all Indian reservations are not subject to State taxation except by virtue of express authority conferred upon the State by Act of Congress. U.S. Dept. of the Interior, Federal Indian Law 845 (1958) quoted with approval in *McLanahan* v. *Arizona State Tax Commission* 411 U.S. 164, 170–171 (1973).

If Congress has expressly consented to state taxation or regulation of on-reservation business activities of tribal members, the doctrine of federal regulatory preemption does not apply, *Rice* v. *Rehner*——U.S.——(1983) 103 S.CT. 3291 (1983). (State liquor license tax applied to Indian trader valid). Federal preemption in the case of Indians residing on Indian reservations also has a statutory basis. Section 106(a) of Title 4 U.S.C. grants to State general authority to impose an income tax on residents of federal areas, but section 109 expressly provides that "(n)othing in section 105 and 106 of this Title shall be deemed to authorize the levy or collection of any tax on or from any Indian not otherwise taxed."

The doctrine of preemption ousts state tax jurisdiction over non-Indians doing business within Indian country if there is a federal statute or treaty giving the tribe exclusive tax jurisdiction over the non-Indian activity, *Central Machinery Co.* v. *Arizona State Tax Commission* 448 U.S. 160 (1980) (State gross receipts tax on sales transactions occurring on the reservation), *Ramah Navajo School*

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[94] Under the intergovernmental tax immunity doctrine a federal instrumentality was constitutionally immune from state taxes, *McCulloch* v. *Maryland* 4 Wheat 316 (1819). Federal employees were also exempted from state income taxes, *The Collector* v. *Day* 78 U.S. 113 (1870). The doctrine was applied at one time to bar a state tax on the lessees of, or the product or income from Indian lands or individual Indians. The doctrine was rejected in *Oklahoma Tax Commission* v. *Texas Co.* 336 U.S. 342, 365–66 (1949) and *Mescalero Apache Tribe* v. *Jones* 411 U.S. 145 (1973); *Oklahoma Tax Commission* v. *United States* 319 U.S. 598 (1943). See also *Leahy* v. *State Treasurer of Oklahoma* 297 U.S. 420 (1936); *United States* v. *Rickert* 188 U.S. 432 (1903); L.H. Tribe, *The Remnant of Intergovernmental Immunities in Litigation, Taxation, and Regulation: Separation of Powers Issues in Controversies about Federalism*, 89 *Harv. L. Rev.* 682 (1976).

Board v. *New Mexico* 102 S. Ct. 3394 (1982) (State gross receipts tax imposed on non-Indian contractor working on reservation), or if the state tax interferes "to an unpermissible extent" with the ability of the tribe to govern itself." *Crow Tribe of Indians* v. *State of Montana* 650 F.2d 1104 (9th Cir. 1981) (State severance tax on coal produced and gross proceeds tax on sale of coal mined by non-Indian mineral lessees with Indian Country). That is, the concept of Indian sovereignty defines the boundaries of tribal-state tax jurisdiction if there is a finding of interference with tribal self-government, *Washington* v. *Confederated Tribes of Colville,* 447 U.S. 134 (1980) (State cigarette sales tax on sales to non-members valid; state personal property tax on Indian-owned vehicles, mobile homes invalid) or if the effect of the state tax is to reduce the profit inuring to the tribe from tribal resources, *White Mountain Apache Tribe* v. *Bracker* 448 U.S. 136 (1980) (State gross receipt and motor fuel tax non-Indian carrying on logging activities on Indian reservation).

A state tax on non-Indians doing business within Indian country constitutes an impermissible interference with Indian self-government where it can be shown that the economic incidence of the state tax is on the tribe, and the result is to impair the ability of the tribe to raise revenue for needed governmental services. *Crow Tribe of Indians* v. *State of Montana,* 650 F. 2d 1104 (9th Cir. 1981); *White Mountain Apache Tribe* v. *Bracker,* 448 U.S. 136 (1980). The doctrine of preemption does not apply to state taxation of tribal activities conducted outside of the reservation, *Mescalero Apache Tribe* v. *Jones* 411 U.S. 145 (1973) (States gross receipts tax on ski resort operated by Indian of off-reservation land). Again, there is no double taxation since tribal tax system assert jurisdiction to tax on a territorial basis only.

The doctrine of preemption also does not apply to state taxation of on-reservation business if Congress has expressly consented to state imposition of the tax, *Rice* v. *Rehner* —— U.S. —— (1983) 103 S. Ct. 3291 (1983). (State liquor license tax applied to Indian trader valid); *The Blackfeet Tribe of Indians* v. *Montana,* 507 F. Supp. 446 (D.Mont. 1981) (State tax on oil and gas production by non-Indian lessees on allotted Indian land valid) or if the state tax does not interfere with tribal self-government, *Washington* v. *Confederated Tribes of Colville,* 447 U.S. 134 (1980) (State cigarette sales tax on sales to non-members valid); *Agua Caliente Band of Mission Indians* v. *City of Riverside* 306 F. Supp. 279 Dist. Ct. C.D. Ca. (1969) (State possessory interest tax on non-Indian lessee of tribal land valid); *Mescalero Apache Tribe* v. *O'Cheskey* 625 F. 2d 967 (10th Cir. 1980) (State gross receipts tax imposed on non-Indian contractor doing construction work on reservation valid). If the doctrine of preemption does not apply to oust state tax jurisdiction over on-reservation business activity, the result is double taxation of the same activity or income source if the tribe also imposes a tax on the tribal activity. *Washington* v. *Confederated Tribes of Colville,* 447 U.S. 134 (1980) at p. 151; *Moe* v. *Salish & Kootenai Tribes* 425 U.S. 463 (1976).

Finally, double taxation may also occur where the state has imposed a severance tax on non-Indian lessees of tribal mineral resources and subsequently the tribe imposes a severance tax on the same activity. Imposition of the tribal tax does not oust the prior state tax. *Merrion* v. *Jicarilla Apache Tribe* 455 U.S. 130 (1982).

C. COORDINATION OF TRIBAL-STATE TAX SYSTEMS

Both the state and the tribal governments have an interest in taxing non-Indians doing business within Indian country. Were the tribes to extend their tax jurisdiction to cover Indians doing business or employed off the reservation, both the state and the tribal governments also could legitimately assert tax jurisdiction over the Indian. There are three possible remedies for fiscal conflict between state and tribal tax jurisdictions: separation of tribal-state sources of revenue; deduction of the tribal tax from the state tax base; deduction of the tribal tax from the state tax. Separation of tribal-state sources of revenue already exists in the case of reservation Indians and non-Indians not doing business within Indian country. In the first case the state lacks jurisdiction to tax;[95] in the second case tribal governments so far has asserted jurisdiction to tax on a territorial basis only. In the case of non-Indian business taxpayers tribal taxes are a deductible business expense for state income tax purposes. The tax credit mechanism has never been used although the issue was raised in *Washington* v. *Confederated Tribes of the Colville Indian Reservation* 447 U.S. 134 (1980). In *Colville* the tribal government contended that the state should be required to allow a tax credit against its cigarette excise tax for the tribal cigarette excise. The court dismissed this contention on the ground that the tribes "failed to demonstate that business at the smokeshops would be significantly reduced by a state tax without a credit as compared to a state tax with a credit." (p. 157).

There is ample federal precedent for coordination of tribal and federal tax systems by use of the tax credit mechanism. State death tax payments are creditable against the federal estate tax; foreign income taxes are creditable against the federal income tax; state unemployment insurance taxes are creditable against the federal unemployment tax. Of course, if the tax is credited it cannot also be deducted. The effect of a tax credit is to defer tax jurisdition to the government whose tax is creditable. In the tribal-state context it would put the state taxing power at the service of the tribes, thereby encouraging the tribes to enact tax ordinances that would maximize credit values. Under the present system of double taxation of non-Indians doing business within Indian country, non-Indian business is at a competitive disadvantage. A tax credit for tribal taxes would remove this disadvantage and enable tribal governments to compete for non-Indian business on an equal footing with cities and counties. The first consequence to the state of a tax credit for tribal taxes would be a reduction in tax revenues. This reduction would be equivalent to a cash grant to tribal governments that enact tax ordinances applicable to non-Indian business. Of course, nothing in the credit scheme would prohibit state governments from raising their tax rates to recover taxes lost to the tribal credit. But an increase in taxes for all state residents certainly is preferable to the present system of double taxation on only those state residents doing business on reservations.

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[95] The exception to this general rule is state regulation of liquor license fees on Indian traders. Here the Supreme Court found that Congress had by implication authorized the states to regulate the licensing and distribution of alcoholic beverages on Indian reservations. *Rice* v. *Rehuer* —— U.S. —— (1983), 103 S. Ct. 3291 (1983).

There are many forms that a tax credit can take. For example, the credit can be matched with the tax against which it is offset: a tribal severance tax creditable against the state severance tax; a tribal sales tax creditable against the state sales tax. Or, all tribal taxes of any kind could be creditable against the state income tax. Limits could be put in the maximum amount of the creditable tribal tax; for example, the credict could be limited to a percentage of the state liability.

Both the tribes and the state have an interest in improving the precarious financial position of tribal governments. The tax credit device has the advantage that it is both a subsidy and an incentive to the exercise of tribal self-help. The financial benefits stemming from a credit would accrue directly and immediately to the tribal government. The tax credit is a means of tribal-state tax coordination that should be given careful consideration by state legislatures.

D. TRIBAL-FEDERAL FISCAL CONFLICT

Indians, as United States citizens, are subject to the federal income tax on their world-wide income. *Squire* v. *Capoeman* 351 U.S. 1 (1956); *Superintendent of Five Civilized Tribes* v. *Commissioner* 295 U.S. 418 (1935); *Choteau* v. *Burnet* 283 U.S. 691 (1931). However, income, including capital gains, derived directly from Indian allotments and similiar trust property is exempt. *Squire* v. *Capoeman* 351 U.S. 1 (1956); *Stevens* v. *Commissioner* 452 F.2d 742 (9th Cir. 1971). Indians are also subject to the federal estate and gift taxes except that Indian allotment exempt from income tax are excludible from the decedents' gross estate. *Asenap* v. *United States* 283 F. Supp. 566 Dist. Ct. W.D. OK 1968). Tribal governments are not taxable entities for federal purposes. Rev. Rul. 67-284 1967-2 C.B. 55,58.

E. TRIBAL-FEDERAL TAX COORDINATION

Effective January 1, 1983 and until January 1, 1985 new code section 7871[96] provides that tribal governments recognized by the Treasury Department as exercising sovereign powers are to be regarded as states for purposes, among others, of allowing a personal deduction from federal income for tribal real and personal property taxes, general retail sales taxes, and income taxes. Tribal taxes paid by business concerns are deductible as a business expense. Section 7871 provides also that federal excise taxes shall not apply to articles sold for the exclusive use of Indian tribal governments during this two year period.

To date, no tribal government has enacted an income tax or property taxes applicable to individual reservation Indians. It is not likely that a federal deduction for these taxes is sufficient incentive for them to do so. A federal tax credit for individual tribal taxes might be an inducement for tribal governments to attempt to reach at least those reservation Indians with income in excess of the minimum exempt amount for federal purposes. But not even a federal tax credit for personal property taxes would likely induce tribal governments to enact such taxes given the present conditions of Indian poverty and unemployment. At most, section 7871 allows a deduction for federal income tax purposes of tribal general retail sales taxes—for those few Indians that earn federal taxable income in excess of the minimum exempt amount *and* who itemize their allowable non-business expenditures.

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[96] Pub. L. 97-473, S 202(a), 97th Cong. 2d Sess. See H.R. Rept. No. 97-984.

IV.—CONCLUSION

The accumulation of capital in a developing economy requires the creation of an economic surplus above current consumption. Taxation is one means of financing such capital accumulation. But the accumulation of capital is not, without more, sufficient. Institutions must be developed to channel the tax funds into capital formation in production facilities and to recycle these funds through successive Indian enterprises. What is needed is a strong tax collection agency and an Indian development bank. There is no economic merit in a high level of taxation as such. In the last analysis the tax function cannot be separated from the expenditure function.

APPENDIX—TRIBAL EXPERIENCE

In order to gain insight on current tribal tax effort, letters were sent to 239 Tribal governments listed with the Bureau of Indian Affairs requesting answers to the following questions:

(1) Does the tribe have a tax code, statute or ordinance? If so, could you please enclose a copy of this in your reply.

(2) Was this tax code submitted to the Bureau of Indian Affairs or Department of the Interior for approval?

(3) Do you have a separate agency or department that administers your tax system?

(4) Do you have an agreement with the state in which you are located under which the state tax administration collects the tribal tax and turns over to the tribe the amount collected? Do you think this kind of agreement would be a good idea?

(5) If you have enacted a tax, has it ever been challenged in court? What result? If the tax was held illegal, what did you do?

(6) Do you have a tax currently in effect and under which you are collecting revenue? What amount of revenue do you collect each year?

Thank you for responding to this inquiry. I look forward to your reply. Please contact me if you need further information.

Replies were received from 37 tribes.

The 15 tribes listed below stated that they had not enacted any tax ordinances and had no present plans to enact a tax ordinance:

Jemez Pueblo
San Juan Pueblo
Seneca Cayuga
Pueblo of Isleta
Ft. Belknap
Alaska Natives
White Mountain Apache
Colville Confederated Tribes
Kiowa Tribe of Oklahoma
Chickasaw Nation
Absentee-Shawnee of Oklahoma
Mississippi Band of Choctaw
Cherokee Nation of Oklahoma
Omaha Tribe of Nebraska
Viejas Community

The seven tribes listed below replied that enactment of a tribal ordinance was under study or in a development stage:

San Carlos Apache
Delaware Tribe of Western Oklahoma
Laguna Pueblo
Sisseton-Wahpeton Tribe of Sioux
Comanche
Cheyenne and Arapaho of Oklahoma
Flandreau Santee Sioux

Fifteen of the 239 tribes to whom letters were sent replied that they had tribal tax ordinances in effect:

Cheyenne River Sioux
Eastern Band of Cherokees
Quileute
Sac and Fox

Gila River
Hopi
Lac du Flambeau Chippewas
Northern Cheyenne
Papago
Warm Springs
Shoshone-Bannock
Three Affiliated Tribes
Turtle Mountain Chippewas
Umatella
Ute Mountain Utes

Several of the tribes reported that one or more of their tax ordinances were being challenged: the Hopi severance tax is being contested by Peabody Coal Co.; the Quilete gross receipts tax was challenged and an out-of-court settlement made; Tenneco has refused to pay the Sac and Fox possessory interest tax on mineral leases; Warm Springs has not attempted yet to enforce its tax ordinances. All fifteen of the tribes reporting a tax ordinance in effect reported that the tax revenues were deposited in a general fund and used to defray the cost of governmental services. The Eastern Band of Cherokees, Shoshone-Bannock, Sac and Fox and Umatilla Tribes reported that BIA approval of their tax ordinances was not required. The tax ordinances for the other tribes that reported had received BIA approval.

A summary of tribal tax ordinances prepared by David C. Cole, Associate Director, Harvard Institute for International Development and member of the Navajo Tax Commission lists fifty one Indian tribes as having tax ordinances in effect as of March 1983. The taxes in force are one or more of the exportable taxes covered in Section II A.

	Tribes
Tobacco and/or liquor excises	27
License to regulate tobacco products	4
Severance tax	6
Business license tax	9
Business activity tax	9
General sales tax	8
Possessory interest tax	4
Payroll tax	0

Table I

SUMMARY OF TRIBAL TAX ORDINANCES

TRIBE	GENERAL SALES	EXCISES	LICENSES	SEVERANCE	PROPERTY	INCOME/RECEIPTS
Blackfeet*				Oil & Gas-2.1-2.65% gross value		
Cheyenne River Sioux	Use Tax-5%. Food-4%.	Cigarettes-6-10 mills	Business-$25-$35. Liquor-$200-$2,000. Beer/Wine-$25-$125		Business on Leased Lands: Grazing-3¢/acre. Farming-10¢/acre.	Gross Receipts-3%.
Colville*		Cigarettes-3¢/pack.				
Crow*					Leases to non-members: Grazing-3¢/acre. Farming-20¢/acre.	
Eastern Band of Cherokees	Retail Sales-6%.		Merchants & Vendors-$25. Machines-$10.		Lease Fee-3%.	
Fallon*		Cigarettes-10¢/pack. Other tobacco-10%.				
Ft. Mohave*					On current value of leasehold or permit	
Ft. Peck*				Oil & Gas-10% of market value.		
Gila River			Business-$100.		Real Estate Transfer-30%.	Business Income-4%. Alcohol & Tobacco Retail-5%+2%. Non-apportioned Gross Receipts on Mining-1%-2%.
Hopi		Native Handicrafts-4%.	Business-$10.	Coal-graduated % by BTUs and method of extraction.	Possessory Interest-2% fair market value.*	
Jicarilla Apache*		Heating fuels-3¢/million BTU.	Oil-29¢/bbl of crude. Gas-3¢/million BTU.			
Kalispel*		Liquor & Tobacco-5%.				
Lac du Flambeau Chippewa		Cigarettes-50¢/carton.				

Table I (continued)

SUMMARY OF TRIBAL TAX ORDINANCES

TRIBE	GENERAL SALES	EXCISES	LICENSES	SEVERANCE	PROPERTY	INCOME/RECEIPTS
Las Vegas Colony*		Cigarettes-5¢/pack.				
Lummi*		Cigarettes-1¢/pack. Liquor-15%.				
Makah*		Cigarettes-5¢/pack.	Business-$10-$50.			Gross Sales-.5%. Gasoline Retail-½¢/gal. Bulk Petroleum-¼¢/gal.
Mescalero*			XX			XX
Moapa*		Cigarettes-10¢/pack. Other Tobacco-10%.				
Muckleshoot*		Liquor-3¢/fl. oz. Beer/Wine-5%.				
Navajo*				Sulphur Discharge Fee	Lease site & underlying resources-5% value.	Navajo Source Gains-5%.
Nez Perce*		Cigarettes-2¢/pack. Other Tobacco-10%.				
Nisqually*		Tobacco-____. Liquor-3¢/fl. oz. Beer/Wine-5%.				
Nooksack*		Tobacco-____. Liquor-15%.				
Northern Cheyenne					Lease: Grazing-5¢/acre. Farming-20¢/acre.*	Business Net Profits-1%.
Oglala Sioux*		Motor Fuel, Wholesale-13¢/gal.				Gross Receipts-1.5-1.5%.
Papago	Retail non-food-3%	Livestock-3%.	Privilege-$5/3 years.			Gross Receipts-5%.
Pt. Gamble Klallam*		Liquor-3¢/fl. oz. Beer/Wine-5%.				
Puyallup*		Liquor-3¢/fl. oz. Beer/Wine-5%.	Tobacco Retail-$500.			

Table I (continued)

SUMMARY OF TRIBAL TAX ORDINANCES

TRIBE	GENERAL SALES	EXCISES	LICENSES	SEVERANCE	PROPERTY	INCOME/RECEIPTS
Pyramid Lake*	Retail & Wholesale-2%.			All minerals-2% of value.	Leasehold- 5% of value.	Gross Income-2%.
Quechan*			XX			Gross Receipts-1½%.
Quileute		Cigarettes-5c/pack. Other tobacco-10%. Gasoline-2c/gal. Fish-5-10c/lb.	Business-$50+5% of sales.			
Quinault*			Privilege-$25-100 multiplied by number of employees. (tax credit for employing tribal members)			
Reno-Sparks*	PROPOSED	Cigarettes-$1/carton.				
Rosebud Sioux*	Sales-4%. (collected and remitted by State)					
Sac and Fox						
Salt River*					Educational Possessory Interest-1.25%.	
Seminole*		Tobacco-____.				
Shakopee Mdewakanton*		Liquor-5c/bottle, 10c/keg.				
Shoalwater Bay*			Business-$25.			Gross Business Income-1%.
Skokomish*		Cigarettes-10c/pack, 12½c/carton. Other tobacco-5%. Liquor-15%.				
Shoshone-Bannock*		Cigarette PROPOSED				
Southern Ute*				Oil & Gas-5% 5% wellhead value.		

Table 1 (continued)

SUMMARY OF TRIBAL TAX ORDINANCES

TRIBE	GENERAL SALES	EXCISES	LICENSES	SEVERANCE	PROPERTY	INCOME/RECEIPTS
Spokane*		Cigarettes-11¢/pack, $1.10/carton. (pre-empted by State)				
Standing Rock*					Lease: Grazing-15¢/acre. Farming-30¢/acre.	
Suquamish*		Cigarettes-2¢/pack. Liquor-4¢/fl. oz. Beer/Wine-5%.				
Swinomish*		Tobacco-5.5%.	Tobacco Retail-$100.			
Three Affiliated Tribes	General Excise-4%.	Building Materials, resale-____.		Oil & Gas-____% value.		
Tulalip*	Sales-.0025%.	Cigarettes-5¢/pack. Other tobacco-10%. Liquor-3¢/fl. oz. Beer/Wine-5%.	Business-$10.	Stumpage-.065%. Other-.00165%.		OTHER
Turtle Mountain Chippewas		Construction Materials, sale or use-6%.				Tribal Employments Rights Ordinance-.5%.
Umatilla		Cigarette-____. (collection by State)				Payroll-4% PROPOSED
Ute Mountain Utes				Oil & Gas - 5% wellhead value.		
Ute Tribe of Uintah and Ouray*	Retail-4½%.			Minerals-1% gross value.		
Walker River*		Cigarettes-10¢/pack. Other tobacco-10%.				
Warm Springs*		Tobacco-(collected by State)	Privilege-$25. Livestock-30¢/head/month. Electricity-1¢/kw-hr.			Allocated Gross Receipts-1%.
Wind River*				Oil & Gas-.5% market value at wellhead.		

Table 1 (continued)

SUMMARY OF TRIBAL TAX ORDINANCES

TRIBE	GENERAL SALES	EXCISES	LICENSES	SEVERANCE	PROPERTY	INCOME/RECEIPTS
Yavapai-Prescott*			Privilege $10. Specific Sales 1%.	All materials (sand and minerals) 1% value 1% gross income		Gross Receipts 1%.
Zuni*			Business $5-$100.			Occupational Retail Gross Receipts 1%.

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* Source: Cole, David C., "Some Economic Considerations for Indian Tribal Taxation." Navajo Tax Commission, 1981. All other information is derived from replies to letters of inquiry sent to all recognized tribes within the United States.